

(FILE 'HOME' ENTERED AT 14:45:14 ON 11 MAY 2003)

FILE 'REGISTRY' ENTERED AT 14:45:19 ON 11 MAY 2003

L1 5 S IPA/CN
L2 1 S (ISOPROPANOL)/CN

FILE 'CAPLUS' ENTERED AT 14:45:58 ON 11 MAY 2003

L3 42546 S L2
L4 1203 S L3 AND (?SILOX?)
L5 0 S (CERAMIC HYDBRID?)
L6 109 S (CERAMIC HYBRID?)
L7 0 S L4 AND L6
L8 0 S L4 AND (CIRCUIT? AND CERAMIC?)
L9 16 S L4 AND CIRCUIT?
L10 16 FOCUS L9 1-
L11 16 S L4 AND HYBRID?
L12 15 S L11 NOT L9
L13 15 FOCUS L12 1-

=>

L10 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1989:9818 CAPLUS

DN 110:9818

TI Storage-stable ladder **siloxane** coating materials

IN Nagata, Kenji

PA Fujitsu Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D003-82

ICA C08G077-38

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 63196669	A2	19880815	JP 1987-30055	19870212
PRAI	JP 1987-30055		19870212		
AB	Title materials, useful as insulation films in multilayer printed circuits , are prepd. by self condensation of poly(diethoxysiloxane) (I) during solvent exchange from isopropanol to butyl Cellosolve acetate (II) to decrease OH content in I, then treating the resulting polymer with glass resins. Thus, a soln. of 300 +/- 1.5 g I in isopropanol was mixed with 1635 +/- 0.8 g II and vacuum evapd. at 35 +/- 1.degree., then the resulting mixt. was treated with 48.0 +/- 0.2 g glass resin at 60.degree. to give a ladder siloxane , which showed no change in viscosity when stored at 5.degree. for 1 mo.				
ST	ladder siloxane insulator printed circuit ; glass resin coating printed circuit ; printed circuit insulating coating siloxane				
IT	Electric insulators and Dielectrics (coatings, ladder siloxanes , prepn. of, with good storage stability, for printed circuits)				
IT	Electric circuits (printed, insulator films for, ladder siloxanes as, with good storage stability)				
IT	67-63-0 , Isopropanol, uses and miscellaneous 112-07-2, Butyl cellosolve acetate RL: USES (Uses) (solvent, in manuf. of storage-stable ladder siloxane coatings)				
RN	67-63-0				
RN	112-07-2				

L10 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1996:472864 CAPLUS

DN 125:171569

TI Environment-friendly washing process using **siloxanes**

IN Shirai, Michio

PA Olympus Optical Co, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C11D007-22

ICS B08B003-08

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 48, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08134498	A2	19960528	JP 1994-276603	19941110
PRAI	JP 1994-276603		19941110		
GI	For diagram(s), see printed CA Issue.				
AB	<p>Washing liqs. contg. low-mol. volatile $\text{Me}_3\text{SiO}(\text{SiMe}_2\text{O})_n\text{SiMe}_3$ ($n = 0, 1, 2$) and/or cyclic siloxanes I ($m = 4, 5$) in consecutively linked washing baths are moved reversely toward the moving direction of the substrates, and the liqs. are removed from the 1st bath, distd. to remove highly volatile impurities, and supplied to the last bath. The washing liqs. may be (pseudo)azeotropic (1) a mixt. of hexamethyldisiloxane and MeOH, EtOH, or isopropanol, (2) a mixt. of octamethyltrisiloxane (II) and isopentyl alc., 2-pentanol, propylene glycol mono-Et ether, propylene glycol tert-Bu ether, propylene glycol mono-Me ether acetate (III), propylene glycol mono-Et ether acetate (IV), or 3-methyl-3-methoxybutyl acetate, (3) a mixt. of decamethyltetrasiloxane and dihydroterpineol, or (4) a mixt. of octamethylcyclotetrasiloxane and III or IV. Lead frames of Cu were subjected to the washing process using II alone.</p>				
ST	<p>environment friendly washing process siloxane; lead frame copper washing process; cyclic siloxane detergent; azeotropic siloxane alc mixt detergent; pseudoazeotropic siloxane alc mixt detergent</p>				
IT	<p>Detergents Electric circuits (low-mol.-wt. volatile (cyclic) siloxanes or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)</p>				
IT	<p>Alcohols, uses Cyclosiloxanes Siloxanes and Silicones, uses RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (low-mol.-wt. volatile (cyclic) siloxanes or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)</p>				
IT	<p>64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 107-46-0, Hexamethyldisiloxane 107-51-7, Octamethyltrisiloxane 123-51-3, Isopentyl alcohol 141-62-8, Decamethyltetrasiloxane 541-02-6, Decamethylcyclopentasiloxane 556-67-2, Octamethylcyclotetrasiloxane 6032-29-7, 2-Pentanol 52125-53-8, Propylene glycol monoethyl ether 58985-02-7, Dihydroterpineol 80763-10-6 84540-57-8, Propylene glycol monomethyl ether acetate 98516-30-4, Propylene glycol monoethyl ether acetate 103429-90-9, 3-Methyl-3-methoxybutyl acetate RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (low-mol.-wt. volatile (cyclic) siloxanes or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)</p>				
RN	64-17-5				
RN	67-56-1				
RN	67-63-0				
RN	107-46-0				
RN	107-51-7				
RN	123-51-3				
RN	141-62-8				
RN	541-02-6				
RN	556-67-2				
RN	6032-29-7				
RN	52125-53-8				
RN	58985-02-7				
RN	80763-10-6				
RN	84540-57-8				

RN 98516-30-4
RN 103429-90-9

L10 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1986:544619 CAPLUS

DN 105:144619

TI Cleaning a **circuit** board

IN Wong, Ching Ping

PA AT and T Technologies, Inc., USA

SC U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C23G001-02

ICS C23G001-14

NCL 134028000

CC 76-14 (Electric Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4604144	A	19860805	US 1985-774674	19850911
PRAI	US 1985-774674		19850911		

AB In a method of cleaning a **circuit** board having a silicone-encapsulated hybrid integrated **circuit** on it, subsequent to aq.-solder-flux residue removal with an ionic detergent (e.g., ethanolamine) the board is cleaned with a low-mol.-wt. org. acid, such as formic, acetic or oxalic acid. Addnl., the silicone may be swelled prior to or during treatment with the aq. org. acid soln. The swellant comprises a member of the group consisting of alcs. and fluorocarbons, including MeOH, EtOH, PrOH and i-PrOH. Application of the method to cleaning hybrid integrated **circuits** is indicated.

ST **circuit** board cleaning; carboxylic acid **circuit** board cleaning; silicone encapsulant **circuit** board cleaning; ionic detergent **circuit** board cleaning; integrated **circuit** cleaning

IT Soldering

(elec. **circuit** board cleaning prior to)

IT **Siloxanes** and **Silicones**, uses and miscellaneous

RL: USES (Uses)

(encapsulants, for elec. **circuit** boards, cleaning of)

IT Carboxylic acids, uses and miscellaneous

RL: USES (Uses)

(in elec. **circuit** board cleaning)

IT Alcohols, uses and miscellaneous

RL: USES (Uses)

(swellants, for silicone encapsulants, in elec. **circuit** board cleaning)

IT Hydrocarbons, uses and miscellaneous

RL: USES (Uses)

(chloro fluoro, swellants, for silicon encapsulants, in elec. **circuit** board cleaning)

IT Electric **circuits**

(integrated, cleaning of)

IT Detergents

(ionic, in elec. **circuit** board cleaning)

IT Electric **circuits**

(printed, boards, cleaning of)

IT 141-43-5, uses and miscellaneous

RL: USES (Uses)

(detergent, for elec. **circuit** board cleaning)

IT 64-18-6, uses and miscellaneous 64-19-7, uses and miscellaneous

144-62-7, uses and miscellaneous

RL: USES (Uses)

(in elec. **circuit** board cleaning)

IT 64-17-5, uses and miscellaneous 67-56-1, uses and miscellaneous

67-63-0, uses and miscellaneous 71-23-8, uses and miscellaneous

RL: USES (Uses)

(swellant, for silicone encapsulants, in elec. **circuit** board cleaning)

RN 141-43-5

RN 64-18-6

RN 64-19-7

RN 144-62-7

RN 64-17-5

RN 67-56-1

RN **67-63-0**

RN 71-23-8

L10 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1983:99846 CAPLUS

DN 98:99846

TI Printed **circuit** board

PA Fujikura Cable Works, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC H05K003-44

CC 76-14 (Electric Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57172797	A2	19821023	JP 1981-56816	19810415
PRAI	JP 1981-56816		19810415		

AB The printed **circuit** board is characterized by a <0.4 mm thick Al layer formed on the surface of the metal such as Fe, Fe alloy, Cu, Cu alloy or Al-Si based alloy, and anodically formed pores filled with a polymer.

ST alumina polymer insulator printed **circuit**

IT **Siloxanes** and Silicones, uses and miscellaneous

RL: TEM (Technical or engineered material use); USES (Uses)

(elec. insulators, for printed-**circuit** board)

IT Electric **circuits**

(printed, boards, alumina and polymer insulators for)

IT 2171-98-4D, hyd., polymer 6184-20-9D, hyd., polymer 51382-55-9D, hyd., polymer 83644-71-7D, hyd., polymer

RL: TEM (Technical or engineered material use); USES (Uses)

(elec. insulators, for printed-**circuit** board)

IT 64-19-7, uses and miscellaneous **67-63-0**, uses and miscellaneous

RL: USES (Uses)

(in prepn. of porous substrates for printed **circuits**)

IT 7429-90-5, uses and miscellaneous 7439-89-6, uses and miscellaneous

7440-50-8, uses and miscellaneous

RL: USES (Uses)

(on aluminum alloy porous boards for printed **circuits**)

IT 12679-19-5

RL: USES (Uses)

(on porous board for printed **circuits**)

RN 2171-98-4D

RN 6184-20-9D

RN 51382-55-9D

RN 83644-71-7D

RN 64-19-7

RN **67-63-0**

RN 7429-90-5
 RN 7439-89-6
 RN 7440-50-8
 RN 12679-19-5

L10 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1993:130098 CAPLUS
 DN 118:130098
 TI Silicone resin additives for fluxes and soldering pastes
 IN Gomi, Tadashi; Douzaki, Yuji
 PA Yuho Chemicals Inc., Japan
 SO Eur. Pat. Appl., 13 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM B23K035-363
 CC 56-9 (Nonferrous Metals and Alloys)
 Section cross-reference(s): 76

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 510539	A1	19921028	EP 1992-106665	19920416
	EP 510539	B1	19970827		
	R: DE, FR, GB, NL, SE				
	JP 05092296	A2	19930416	JP 1991-112550	19910417
	JP 08004953	B4	19960124		
	US 5215601	A	19930601	US 1992-868416	19920415
PRAI	JP 1991-112550		19910417		

AB The soldering flux mixts. and pastes include silicone resins to react with org. acids or their salts for deactivation and decreased corrosion. The resins are selected from methylsilicone, methylphenylsilicone, and/or modified silicone types. The flux mixt. optionally includes a solvent with s.p. below the m.p. of solder. The modified flux preferably has the COOH:SiOH mol ratio of 1:(0.5-1.5), and is suitable for the pastes contg. 40-95 wt.% solder. The preferred fluxes contain org. acids (including rosins) and their salts 0.1-20, silicone resin 0.05-80, and solvents 10-99.85 wt.-%. The solder pastes show decreased corrosion of Cu, esp. for elec.-**circuit** boards.

ST solder paste flux silicone resin; org acid flux deactivation silicone; rosin flux deactivation silicone; elec **circuit** soldering flux silicone

IT Carboxylic acids, uses
 Rosin
 RL: USES (Uses)
 (flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)

IT **Siloxanes** and Silicones, uses
 RL: USES (Uses)
 (flux mixts. contg., to neutralize org. acids in soldering)

IT Solders
 (pastes, silicone resins in fluxes for, to neutralize org. acids and rosins)

IT **Siloxanes** and Silicones, uses
 RL: USES (Uses)
 (alkyd-, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)

IT **Siloxanes** and Silicones, uses
 RL: USES (Uses)
 (epoxy, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)

IT Soldering
 (fluxes, silicone resins in, to neutralize org. acids and rosins)

IT Castor oil
 RL: USES (Uses)
 (hydrogenated, flux mixts. contg., for solder pastes, org. acids
 neutralized by silicone resin in)

IT **Siloxanes** and Silicones, uses
 RL: USES (Uses)
 (hydroxy-contg., flux mixts. contg., for solder pastes, org. acids
 neutralized by silicone resin in)

IT **Siloxanes** and Silicones, uses
 RL: USES (Uses)
 (methoxy, flux mixts. contg., for solder pastes, org. acids neutralized
 by silicone resin in)

IT Electric **circuits**
 (printed, boards, soldering of, fluxes and pastes for, with silicone
 resins)

IT Alkyd resins
 Epoxy resins, uses
 RL: USES (Uses)
 (**siloxane-**, flux mixts. contg., for solder pastes, org. acids
 neutralized by silicone resin in)

IT 64-17-5, Ethanol, uses **67-63-0**, Isopropanol, uses 79-14-1,
 Hydroxyacetic acid, uses 110-15-6, Succinic acid, uses 110-94-1,
 Glutaric acid 111-20-6, Sebacic acid, uses 123-99-9, Azelaic acid,
 uses 124-04-9, Adipic acid, uses 141-82-2, Malonic acid, uses
 34590-94-8, Dipropylene glycol monomethyl ether 84376-09-0 137592-56-4
 146448-14-8
 RL: USES (Uses)
 (flux mixts. contg., for solder pastes, org. acids neutralized by
 silicone resin in)

IT 514-10-3, Abietic acid
 RL: USES (Uses)
 (flux mixts. contg., for soldering, silicone resins for acidity
 neutralization in)

IT 12610-63-8 62258-61-1 136766-80-8 136766-83-1
 RL: USES (Uses)
 (solder, flux mixt. for pastes contg. powd., with silicone resin to
 neutralize org. acids)

IT 7440-50-8, Copper, uses
 RL: USES (Uses)
 (soldering of, flux mixts. in, with silicone resins to neutralize org.
 acids and rosin)

RN 64-17-5
 RN **67-63-0**
 RN 79-14-1
 RN 110-15-6
 RN 110-94-1
 RN 111-20-6
 RN 123-99-9
 RN 124-04-9
 RN 141-82-2
 RN 34590-94-8
 RN 84376-09-0
 RN 137592-56-4
 RN 146448-14-8
 RN 514-10-3
 RN 12610-63-8
 RN 62258-61-1
 RN 136766-80-8
 RN 136766-83-1
 RN 7440-50-8

AN 2002:669624 CAPLUS
 DN 137:194031
 TI Dielectric films for narrow gap-fill applications in integrated-
circuit fabrication
 IN Leung, Roger; Endisch, Denis; Xie, Songyuan; Hacker, Nigel; Deng, Yanpei
 PA Honeywell International, Inc., USA
 SO U.S., 11 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM H01L021-44
 NCL 438118000
 CC 76-3 (Electric Phenomena)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6444495	B1	20020903	US 2001-761529	20010111
	US 2002137260	A1	20020926		
	US 2003087485	A1	20030508	US 2002-188433	20020703
PRAI	US 2001-761529	A3	20010111		

AB A colloidal suspension of nanoparticles composed of a dense material dispersed in a solvent was used in forming a gap-filling dielec. material with low thermal shrinkage, high thermal stability, and high etching resistance. The dielec. material is particularly useful for pre-metal dielec. and shallow trench isolation applications. According to the methods of forming a dielec. material, the colloidal suspension is deposited on a substrate and dried to form a porous intermediate layer. The intermediate layer is modified by infiltration with a liq. phase matrix material, such as a spin-on polymer, followed by curing, by infiltration with a gas phase matrix material, followed by curing, or by curing alone, to provide a gap-filling, thermally stable, etch resistant dielec. material.

ST colloidal dielec film spin coating integrated **circuit** fabrication

IT Silsesquioxanes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (boron-doped; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Annealing

Colloids

Dielectric films

Drying

Integrated **circuits**

Nitriding

Oxidation

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Polymers, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Borosilicates

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Borophosphosilicate glasses

Borosilicate glasses

Phosphosilicate glasses

Polycarbosilanes

Polysiloxanes, uses

Silazanes

RL: TEM (Technical or engineered material use); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Porous materials

(films; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Silicates, uses

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(phospho-; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Films

(porous; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Coating process

(spin; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 998-30-1, Triethoxysilane

RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7440-36-0, Antimony, uses 7440-38-2, Arsenic, uses 7440-42-8, Boron, uses 7723-14-0, Phosphorus, uses

RL: MOA (Modifier or additive use); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 64-17-5, Ethanol, uses 67-63-0, Isopropyl alcohol, uses

67-64-1, Acetone, uses 108-94-1, Cyclohexanone, uses 1303-86-2, Boron oxide (B2O3), uses 7697-37-2, Nitric acid, uses 7727-37-9, Nitrogen, uses 30136-13-1, Propoxypropanol

RL: NUU (Other use, unclassified); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7631-86-9P, Silica, processes 12125-01-8P, Ammonium fluoride

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7440-21-3P, Silicon, uses 11105-01-4P, Silicon oxynitride 12033-89-5P, Silicon nitride, uses

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 1344-28-1, Aluminum oxide, uses 6876-41-1D, derivs. 7429-90-5,

Aluminum, uses 24304-00-5, Aluminum nitride 153315-81-2, Hydrogen silsesquioxane

RL: TEM (Technical or engineered material use); USES (Uses)

(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Fischer; US 6143401 A 2000

(2) Jeng; US 5548159 A 1996

(3) Jeng; US 5858871 A 1999

(4) Mushiake; US 6242135 B1 2001 CAPLUS

- (5) Rosenmayer; US 5889104 A 1999 CAPLUS
 (6) Ryang; US 5962608 A 1999 CAPLUS
 (7) Smith; US 6319852 B1 2001 CAPLUS
 (8) Stober; US 3634558 A 1972 CAPLUS
 (9) Yamada; US 6245439 B1 2001
 (10) Zakhidov; US 6261469 B1 2001 CAPLUS

RN 998-30-1
 RN 7440-36-0
 RN 7440-38-2
 RN 7440-42-8
 RN 7723-14-0
 RN 64-17-5
 RN **67-63-0**
 RN 67-64-1
 RN 108-94-1
 RN 1303-86-2
 RN 7697-37-2
 RN 7727-37-9
 RN 30136-13-1
 RN 7631-86-9P
 RN 12125-01-8P
 RN 7440-21-3P
 RN 11105-01-4P
 RN 12033-89-5P
 RN 1344-28-1
 RN 6876-41-1D
 RN 7429-90-5
 RN 24304-00-5
 RN 153315-81-2

L10 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1999:412782 CAPLUS

DN 131:65892

TI Manufacture of substrates with patterned polysilane layers

IN Fukushima, Motoo; Mori, Shigeru

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-075

ICS G03F007-32; G03F007-38; H05K003-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11174682	A2	19990702	JP 1997-362183	19971211
	JP 3301370	B2	20020715		
	US 6110651	A	20000829	US 1998-208588	19981210
PRAI	JP 1997-362183	A	19971211		

AB The title process involves: (1) formation of polysilane layer on a substrate, (2) selective light irradiation of the layer in presence of a solvent which dissolves **siloxane** but not polysilane, (3) removal of **siloxane** by treatment in a solvent that only dissolves **siloxane**, and (4) complete removal of the solvent. Polysilane may be $(R_1mR_2nXpSi)_q$ [$R_1-2 = (\text{un})\text{substituted hydrocarbon}$; $X = (\text{un})\text{substituted hydrocarbon, alkoxy, halogen}$; $1 \leq m + n + p \leq 2.2$; $10 \leq q \leq 100,000$; $q = \text{integer}$]. Polysilane patterns are formed with high accuracy. The process is useful in manufacture of printed circuit boards, battery electrodes, sensors, etc.

ST polysilane patterning **siloxane** dissoln
 IT Photoimaging materials
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 IT Polysilanes
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation,
 unclassified); TEM (Technical or engineered material use); PREP
 (Preparation); PROC (Process); USES (Uses)
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 IT **Polysiloxanes**, processes
 RL: PNU (Preparation, unclassified); REM (Removal or disposal); PREP
 (Preparation); PROC (Process)
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 IT 146088-00-8P, Poly(methylphenylsilane)
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation,
 unclassified); TEM (Technical or engineered material use); PREP
 (Preparation); PROC (Process); USES (Uses)
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 IT 64-17-5, Ethanol, uses **67-63-0**, Isopropanol, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (manuf. of patterned polysilane by dissoln of **siloxanes** by
 irradn. in presence of alc.)
 RN 146088-00-8P
 RN 64-17-5
 RN **67-63-0**

L10 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1976:6867 CAPLUS

DN 84:6867

TI Detergent for cleaning a polymer surface

IN Bratolyubov, A. S.; Rybak, I. K.; Grabovskii, O. Z.; Bykov, M. V.;
 Goncharenko, G. S.; Lugina, V. P.; Finogeev, N. D.

PA USSR

SO U.S.S.R.

From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1975, 52(36),
 67.

CODEN: URXXAF

DT Patent

LA Russian

IC Cl1D

CC 46-6 (Surface Active Agents and Detergents)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 486040	T	19750930	SU 1974-2003326	19740311
PRAI	SU 1974-2003326		19740311		
AB	Mixts. of Cl2FCCClF2 [76-13-1] 35-45, MeCCl3 [71-55-6] 10-20, and aliph. alc. (EtOH [64-17-5] and/or iso-PROH [67-63-0]) 40-50 vol. were useful for cleaning polymer surfaces (e.g., elec. circuit boards) with min. damage to siloxane elec. insulation.				
ST	detergent cleaning circuit board; elec circuit board cleaning; solvent cleaning circuit board; haloalkane cleaning circuit board; alc cleaning circuit board				
IT	Detergents (cleaning solvents, for soldering flux removal from printed				

circuits)

IT Electric **circuits**
(printed, soldering flux removal from, solvents for)

IT 64-17-5, uses and miscellaneous **67-63-0**, uses and miscellaneous
71-55-6 76-13-1
RL: TEM (Technical or engineered material use); USES (Uses)
(cleaning compns. contg., for elec. **circuit** boards)

RN 64-17-5
RN **67-63-0**
RN 71-55-6
RN 76-13-1

L10 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2000:381447 CAPLUS
DN 132:355738
TI Method of reducing spiral defects in glass by adding an isopropyl alcohol
rinse step before depositing spin-on glass in integrated-**circuit**
fabrication

IN Chiang, Chen-Chia; Lin, Chung-An
PA Taiwan Semiconductor Manufacturing Company, Taiwan
SO U.S., 8 pp.
CODEN: USXXAM

DT Patent
LA English
IC ICM H01L021-31
ICS H01L021-469
NCL 438778000
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 57, 66

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6071831	A	20000606	US 1998-135042	19980817
PRAI	US 1998-135042		19980817		

AB A method of forming an interlevel dielec. layer of spin-on-glass is
described which avoids spiral defects from occurring in the layer of
spin-on-glass. Before the spin-on-glass is deposited and with the wafer
spinning at a low angular velocity a 1st vol. of iso-Pr alc. is deposited
on the wafer. The wafer continues to spin at the low angular velocity for
a short time. With the wafer continuing to spin at the low angular
velocity a 2nd vol., less than the 1st vol., of spin-on-glass is deposited
on the wafer. The wafer continues to spin at the low angular velocity for
a short time and then is spun at a high angular velocity for a longer
time. The wafer is then removed from the app. used to deposit the
spin-on-glass and processing of the wafer continues. Spiral defects in
the layer of spin-on-glass are avoided.

ST spin on glass spiral defect isopropanol rinsing silicon; integrated
circuit rotation spin glass coating

IT **Polysiloxanes**, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(Me; method of reducing spiral defects in glass by adding iso-Pr alc.
rinse step for silicon before depositing spin-on glass in integrated-
circuit fabrication)

IT Dielectric films
Integrated **circuits**
Rotation
Semiconductor device fabrication
(method of reducing spiral defects in glass by adding iso-Pr alc. rinse
step for silicon before depositing spin-on glass in integrated-
circuit fabrication)

IT Glass, properties

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(spin on; method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-circuit fabrication)

IT Coating process
Washing

(spin; method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-circuit fabrication)

IT 7440-21-3, Silicon, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-circuit fabrication)

IT 64-17-5, Ethanol, processes 67-63-0, Isopropyl alcohol, processes 71-36-3, 1-Butanol, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-circuit fabrication)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Akram; US 5925410 1999
 - (2) Chang; ULSI Technology 1996, P92 CAPLUS
 - (3) Gardner; US 5535525 1996
 - (4) Ikeno; US 5264246 1993
 - (5) Ilg; US 5807792 1998 CAPLUS
 - (6) Kim; US 5874128 1999
 - (7) Lin; US 5646071 1997 CAPLUS
 - (8) Sanada; US 5843527 1998
 - (9) Sato; US 6022806 2000 CAPLUS
 - (10) Shirley; US 5912049 1999
 - (11) Wang; US 5780105 1998
 - (12) Wilson; US 5990014 1999 CAPLUS
 - (13) Yen; US 6004622 1999 CAPLUS
 - (14) Ziger; US 5272118 1993
- RN 7440-21-3
RN 64-17-5
RN 67-63-0
RN 71-36-3

L10 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2000:861954 CAPLUS

DN 134:20313

TI Vapor deposition for protective coating on spherical solder-alloy powders

IN Minogue, Gerard R.

PA Alpha Metals, Inc., USA

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM H01L021-48

ICS H01L023-498; H05K003-34; B23K035-02

CC 56-9 (Nonferrous Metals and Alloys)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000074132	A1	20001207	WO 2000-US15220	20000601

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
 CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
 LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD,
 SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,
 ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6506448 B1 20030114 US 2000-584674 20000531
 EP 1232524 A1 20020821 EP 2000-938067 20000601

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL

PRAI US 1999-137031P P 19990601
 US 2000-584674 A2 20000531
 WO 2000-US15220 W 20000601

AB The surface of spherical solder-alloy powder is coated by vapor deposition using a soln. contg.: (a) volatile org. solvent; (b) low-viscosity oil or org. acid at nominally 0.05-5.0%; and (c) a surfactant at 0.01-1.0%, and optional flux and/or UV-fluorescent dye. The solder-alloy powder in a chamber is dipped into the coating soln. in a vapor-tight 2nd chamber, and after a predetd. time is removed, placed into 3rd vapor-tight low-pressure chamber, and heated to 54-121.degree. to vaporize the residual solvent with optional recovery. The coated alloy powder can be stored without corrosion, and can be used in elec. conducting solder pastes or adhesives. The coated solder spheres are suitable for assembly of elec.

circuit boards with surface-mounted electronic parts, followed by heating for reflow soldering. The typical coating soln. contains AcOH as the solvent, paraffin oil or isostearic acid as the low-viscosity addn., simethicone as the surfactant, and a polar or nonpolar flux.

ST solder alloy ball protective coating soln; elec **circuit** assembly coated solder ball

IT Fluorescent dyes

(UV-, coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Electric **circuits**

(assemblies, spherical solder for; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Lubricating oils

Surfactants

(coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Paraffin oils

Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT **Cyclosiloxanes**

RL: MOA (Modifier or additive use); USES (Uses)

(di-Me, surfactant, coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Polyolefins

RL: MOA (Modifier or additive use); USES (Uses)

(oil, coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Solders

(spheres, coating of; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT 64-17-5, Ethanol, uses 67-63-0, Isopropanol, uses 67-64-1,
 Acetone, uses 79-01-6, Trichloroethylene, uses 106-94-5, n-Propyl
 bromide 124-04-9, Adipic acid, uses 30399-84-9, Isostearic acid
 RL: MOA (Modifier or additive use); USES (Uses)

(coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)
IT 541-02-6, **Decamethylcyclopentasiloxane** 8050-81-5, Simethicone
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant, coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Fry Metals Inc; WO 9701414 A 1997 CAPLUS
- (2) Fujitsu Ltd; EP 0539211 A 1993
- (3) Murata Manufacturing Co; EP 0905775 A 1999
- (4) Union Carbide Chem Plastic; EP 0556864 A 1993 CAPLUS

RN 64-17-5
RN 67-63-0
RN 67-64-1
RN 79-01-6
RN 106-94-5
RN 124-04-9
RN 30399-84-9
RN 541-02-6
RN 8050-81-5

L10 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1996:437814 CAPLUS

DN 125:89676

TI Cleaning agent, method and equipment

IN Kumagai, Masaru; Shimozawa, Hiroshi; Oguni, Naoyuki; Inada, Minoru; Saito, Nobuhiro; Yamafuji, Shigeo; Shimizu, Chiyuki; Umehara, Kazunori

PA Kabushiki Kaisha Toshiba, Japan; Toshiba Silicone Co., Ltd.

SO PCT Int. Appl., 124 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM B08B003-08

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9612571	A1	19960502	WO 1995-JP2149	19951019
	W: CN, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 787537	A1	19970806	EP 1995-934846	19951019
	R: DE, ES, FR, GB, IT, NL				
	CN 1170374	A	19980114	CN 1995-196867	19951019
	JP 3002261	B2	20000124	JP 1996-513771	19951019
PRAI	JP 1994-253487	A	19941019		
	JP 1994-253488	A	19941019		
	JP 1994-253489	A	19941019		
	JP 1994-253490	A	19941019		
	JP 1994-253491	A	19941019		
	JP 1994-253492	A	19941019		
	JP 1995-84066	A	19950410		
	JP 1995-108410	A	19950502		
	JP 1995-108411	A	19950502		
	JP 1995-108412	A	19950502		
	WO 1995-JP2149	W	19951019		

AB The title cleaning agent can substitute for chlorofluorocarbon or chlorinated solvents. In particular, the method is for cleaning electronics parts such as printed boards or mounted parts or metallic parts, and is possible to remove various contaminants from the parts and dry the same to the extent comparative to that of the method of cleaning

with chlorofluorocarbon or chlorinated solvents. Examples of the cleaning agent include polar cleaning agents with a soly. parameter of ≥ 9 or a permittivity of ≥ 4 , mixts. thereof with other cleaning agents with a soly. parameter of < 9 and a permittivity of < 4 , and cleaning agents contg. as the active ingredient an azeotropic or pseudoazeotropic compn. contg. a low-mol.-wt. **siloxane** compd. The cleaning method is characterized by comprising ≥ 1 step selected from the group consisting of the step of cleaning the object with a polar cleaning agent having a soly. parameter of ≥ 9 or a permittivity of ≥ 4 , the step of rinsing the object with a mixt. of the above polar cleaning agent with another cleaning agent having a soly. parameter of < 9 and a permittivity of < 4 , and the drying step.

- ST polar cleaning agent electronic part; azeotropic **siloxane** cleaning compn; pseudoazeotropic **siloxane** cleaning compn; chlorofluorocarbon substitute cleaning agent; chlorinated solvent substitute cleaning agent; fluorocarbon cleaning agent electronic part; water drying agent app
- IT Drying apparatus
Electric apparatus
(cleaning agent, method and equipment for electron parts)
- IT Hydrocarbons, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(cleaning agent, method and equipment for electron parts)
- IT Acetals
Alcohols, uses
Amides, uses
Amines, uses
Anhydrides
Cyclosiloxanes
Esters, uses
Ethers, uses
Glycols, uses
Ketones, uses
Nitriles, uses
Perfluorocarbons
Phenols, uses
Quaternary ammonium compounds, uses
Sulfoxides
RL: TEM (Technical or engineered material use); USES (Uses)
(cleaning agent, method and equipment for electron parts)
- IT **Siloxanes** and Silicones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(low-mol.-wt.; cleaning agent, method and equipment for electron parts)
- IT Degreasing
(agents, cleaning agent, method and equipment for electron parts)
- IT Cleaning
(app., cleaning agent, method and equipment for electron parts)
- IT Detergents
(azeotropic, cleaning agent, method and equipment for electron parts)
- IT Hydrocarbons, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(chloro fluoro, cleaning agent, method and equipment for electron parts)
- IT Detergents
(cleaning compns., cleaning agent, method and equipment for electron parts)
- IT Detergents
(cleaning compns., spray, cleaning agent, method and equipment for electron parts)
- IT Hydrocarbons, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)
 (fluoro, cleaning agent, method and equipment for electron parts)

IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fluoro, cleaning agent, method and equipment for electron parts)

IT Perhalocarbons
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fluoroiodo, cleaning agent, method and equipment for electron parts)

IT Electric **circuits**
 (printed, boards, cleaning agent, method and equipment for electron parts)

IT 178820-74-1 178820-75-2 178820-76-3 178820-77-4 178820-78-5
 178820-79-6 178820-80-9 178820-81-0
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (azeotropic; cleaning agent, method and equipment for electron parts)

IT 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses **67-63-0**,
 2-Propanol, uses 67-64-1, Acetone, uses 71-23-8, 1-Propanol, uses
 75-05-8, Acetonitrile, uses 75-52-5, Nitromethane, uses 75-65-0,
 tert-Butanol, uses 75-85-4, tert-Pentyl alcohol 75-89-8 76-05-1,
 Trifluoroacetic acid, uses 78-82-0, Isobutyronitrile 78-93-3, Methyl
 ethyl ketone, uses 79-24-3, Nitroethane 96-22-0, 3-Pentanone
 105-37-3, Ethyl propionate 107-12-0, Propionitrile 107-15-3,
 Ethylenediamine, uses 107-46-0, **Hexamethyldisiloxane**
 107-51-7, **Octamethyltrisiloxane** 108-21-4, Isopropyl acetate
 109-60-4, Propyl acetate 109-73-9, Butylamine, uses 109-74-0,
 Butyronitrile 109-86-4, 2-Methoxyethanol 109-99-9, THF, uses
 110-01-0, Thiophane 110-71-4, 1,2-Dimethoxyethane 110-85-0,
 Piperazine, uses 110-91-8, Morpholine, uses 111-27-3, 1-Hexanol, uses
 112-34-5, Diethylene glycol monobutyl ether 123-51-3, Isopentyl alcohol
 123-86-4, Butyl acetate 138-22-7, Butyl lactate 141-78-6, Ethyl
 acetate, uses 141-79-7, Mesityl oxide 307-34-6 335-57-9, Fluorinert
 PF 5070 352-93-2, Diethyl sulfide 355-42-0 378-94-9,
 Perfluoromorpholine 382-28-5 422-56-0 542-55-2, Isobutyl formate
 556-67-2, **Octamethylcyclotetrasiloxane** 583-59-5,
 2-Methylcyclohexanol 591-78-6, 2-Hexanone 872-50-4, NMP, uses
 1320-67-8 3452-97-9, 3,5,5-Trimethylhexanol 7664-38-2, Phosphoric
 acid, uses 51000-94-3 52125-53-8, Propylene glycol monoethyl ether
 56539-66-3, 3-Methoxy-3-methyl-1-butanol 75330-23-3 111109-77-4,
 Dipropylene glycol dimethyl ether 139063-93-7
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (cleaning agent, method and equipment for electron parts)

RN 178820-74-1
 RN 178820-75-2
 RN 178820-76-3
 RN 178820-77-4
 RN 178820-78-5
 RN 178820-79-6
 RN 178820-80-9
 RN 178820-81-0
 RN 64-17-5
 RN 64-19-7
 RN **67-63-0**
 RN 67-64-1
 RN 71-23-8
 RN 75-05-8
 RN 75-52-5
 RN 75-65-0
 RN 75-85-4
 RN 75-89-8
 RN 76-05-1

RN 78-82-0
RN 78-93-3
RN 79-24-3
RN 96-22-0
RN 105-37-3
RN 107-12-0
RN 107-15-3
RN 107-46-0
RN 107-51-7
RN 108-21-4
RN 109-60-4
RN 109-73-9
RN 109-74-0
RN 109-86-4
RN 109-99-9
RN 110-01-0
RN 110-71-4
RN 110-85-0
RN 110-91-8
RN 111-27-3
RN 112-34-5
RN 123-51-3
RN 123-86-4
RN 138-22-7
RN 141-78-6
RN 141-79-7
RN 307-34-6
RN 335-57-9
RN 352-93-2
RN 355-42-0
RN 378-94-9
RN 382-28-5
RN 422-56-0
RN 542-55-2
RN 556-67-2
RN 583-59-5
RN 591-78-6
RN 872-50-4
RN 1320-67-8
RN 3452-97-9
RN 7664-38-2
RN 51000-94-3
RN 52125-53-8
RN 56539-66-3
RN 75330-23-3
RN 111109-77-4
RN 139063-93-7

L10 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2001:731251 CAPLUS

DN 135:281843

TI Method of producing a multilayered wiring board with small area via holes

IN Toyoshima, Toshiyuki; Yanaura, Satoshi; Furuhashi, Yasuo; Fujioka,
Hirofumi

PA Japan

SO U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM H05K003-02

ICS H05K003-10

NCL 029852000

CC 76-14 (Electric Phenomena)
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001025414	A1	20011004	US 2000-738855	20001218
	JP 2001284813	A2	20011012	JP 2000-97250	20000331
PRAI	JP 2000-97250	A	20000331		
AB	Method of producing a multilayered wiring board comprising the steps of subjecting the photosensitive resin to exposure- and development-treatment to form the holes having a predetd. size and shape; depositing and forming the curable resin to the insulating layer having the holes formed therein in such a manner as to bury the holes, and conducting heat-treatment to form the cured thin film of the curable resin on the surface of the insulating layer; and so removing the curable resin as to leave the cured thin film to obtain the via-holes having the reduced opening size by the cured thin film.				
ST	printed circuit board via hole polymer resin				
IT	Polyvinyl acetals				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(S-Lec KW 3; method of producing multilayered wiring board with small area via holes)				
IT	Epoxy resins, processes				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(acrylates; method of producing multilayered wiring board with small area via holes)				
IT	Coating process				
	Contact holes				
	Crosslinking				
	Dielectric films				
	Heat treatment				
	Printed circuit boards				
	(method of producing multilayered wiring board with small area via holes)				
IT	Acrylic polymers, processes				
	Aminoplasts				
	Butadiene rubber, processes				
	Phenolic resins, processes				
	Polysiloxanes , processes				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(method of producing multilayered wiring board with small area via holes)				
IT	Epoxy resins, processes				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(photosensitive; method of producing multilayered wiring board with small area via holes)				
IT	Interconnections (electric)				
	(vias; method of producing multilayered wiring board with small area via holes)				
IT	25068-38-6				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(E 1001; method of producing multilayered wiring board with small area via holes)				
IT	9003-17-2				
	RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(butadiene rubber, method of producing multilayered wiring board with				

✓
date ?

small area via holes)

IT 362660-00-2, CPC 8000
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (copper paste; method of producing multilayered wiring board with small area via holes)

IT 1310-73-2, Sodium hydroxide, processes
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (developer; method of producing multilayered wiring board with small area via holes)

IT **67-63-0**, Isopropanol, processes 111-76-2, Butyl cellosolve
 7738-94-5, Chromic acid (H₂CrO₄)
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (method of producing multilayered wiring board with small area via holes)

IT 471-34-1, Calcium carbonate, processes 621-82-9D, Cinnamic acid, esters
 2669-72-9, MX 280 9003-08-1, Cymel 370 9003-18-3, Butadiene-acrylonitrile copolymer 58607-87-7 71868-10-5, Irgacure 907
 115166-29-5, Epikote 180 210106-42-6, XP 9500CC 362660-64-8, JSR-KS 22
 362660-65-9, Probelec XB 7081
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (method of producing multilayered wiring board with small area via holes)

IT 362658-73-9, OM 950
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (neutralizing agent; method of producing multilayered wiring board with small area via holes)

RN 25068-38-6
 RN 9003-17-2
 RN 362660-00-2
 RN 1310-73-2
 RN **67-63-0**
 RN 111-76-2
 RN 7738-94-5
 RN 471-34-1
 RN 621-82-9D
 RN 2669-72-9
 RN 9003-08-1
 RN 9003-18-3
 RN 58607-87-7
 RN 71868-10-5
 RN 115166-29-5
 RN 210106-42-6
 RN 362660-64-8
 RN 362660-65-9
 RN 362658-73-9

L10 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1999:650669 CAPLUS

DN 131:275831

TI Automated detection and reporting of volatile organic compounds (VOCs) in complex environments

AU Hargis, P. J., Jr.; Preppernau, B. L.; Osbourn, G. C.; Ricco, A. J.; Frye, G. C.

CS Laser, Optics and Remote Sensing Department, Sandia National Laboratories, Albuquerque, NM, 87185-1423, USA

SO Sandia National Laboratories [Technical Report] SAND (1997), SAND97-0509, i-vii, 1-18

CODEN: SNLSDT

DT Report
LA English
CC 59-1 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 47, 80
AB Results of work to develop volatile org. compd. (VOC) sensing systems based on 2 complementary techniques are discussed. The first technique used a gated channeltron detector for resonant laser-induced multiphoton photoionization detection of trace org. vapors in a supersonic mol. beam. The channeltron was gated using a relatively simple **circuit** to generate a neg. gate pulse with a width of 400 ns (FWHM), a 50 ns turn-on (rise) time, a 1.5 μ s turn-off (decay) time, a pulse amplitude of -1000 V, and a DC offset adjustable from 0 to -1500 V. This gated channeltron rejects spurious responses to UV laser light scattered directly into the channeltron and time-delayed ionization signals induced by photoionization of residual gas in the vacuum chamber. Detection limits in the part-per-trillion range were demonstrated with the gated detector. The second technique used arrays of surface acoustic wave (SAW) devices coated with various chem. selective materials (e.g., polymers, self-assembled monolayers) to provide unique response patterns to various chem. analytes. This work focused on polymers, formed by spin casting from soln. or by plasma polymn., as well as on self-assembled monolayers. Response from coated SAW to various concns. of water, VOC, and organophosphonates (chem. warfare agent simulants) were used for calibration data. A novel visual empirical region of influence (VERI) pattern recognition technique was used to evaluate the ability to use these response patterns to correctly identify chem. species. This study showed how the VERI technique can be used to det. the best set of coatings materials, and to identify unknown analytes based on previous calibration data.
ST volatile org detn monitoring air analysis; chem sensor automated volatile org detn monitoring; laser induced multiphoton ionization volatile org detection; surface acoustic wave sensor volatile org detection
IT Air analysis
Sensors
(automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Volatile organic compounds
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT **Polysiloxanes**, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(cyanide-modified; sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Polyoxyalkylenes, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(fluorine- and sulfo-contg., ionomers, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Polyoxyalkylenes, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(fluorine-contg., sulfo-contg., ionomers, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using

laser-induced multiphoton ionization and surface acoustic wave
microsensor array-equipped chem. sensors)

IT Alcohols, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(polyhydric, fluoro, sensor coating; automated volatile org. compd. and
mixt. detn. and monitoring in air using laser-induced multiphoton
ionization and surface acoustic wave microsensor array-equipped chem.
sensors)

IT Fluoropolymers, uses
Fluoropolymers, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(polyoxyalkylene-, sulfo-contg., ionomers, sensor coating; automated
volatile org. compd. and mixt. detn. and monitoring in air using
laser-induced multiphoton ionization and surface acoustic wave
microsensor array-equipped chem. sensors)

IT Ionomers
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(polyoxyalkylenes, fluorine- and sulfo-contg., sensor coating;
automated volatile org. compd. and mixt. detn. and monitoring in air
using laser-induced multiphoton ionization and surface acoustic wave
microsensor array-equipped chem. sensors)

IT 56-23-5, analysis 67-56-1, Methanol, analysis **67-63-0**,
Isopropanol, analysis 67-64-1, 2-Propanone, analysis 67-66-3,
Chloroform, analysis 71-23-8, n-Propanol, analysis 71-43-2, Benzene,
analysis 78-93-3, Methyl ethyl ketone, analysis 79-01-6,
Trichloroethylene, analysis 108-88-3, Toluene, analysis 110-54-3,
Hexane, analysis 110-82-7, Cyclohexane, analysis 127-18-4,
Perchloroethylene, analysis 464-07-3, Pinacolyl alcohol 756-79-6,
Dimethyl methyl phosphonate 1445-75-6, Diisopropyl methyl phosphonate
5989-27-5 26635-64-3, Isooctane
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU
(Occurrence)
(automated volatile org. compd. and mixt. detn. and monitoring in air
using laser-induced multiphoton ionization and surface acoustic wave
microsensor array-equipped chem. sensors)

IT 24937-05-1, Polyethylene glycol adipate
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(cyanide-modified; sensor coating; automated volatile org. compd. and
mixt. detn. and monitoring in air using laser-induced multiphoton
ionization and surface acoustic wave microsensor array-equipped chem.
sensors)

IT 79-10-7, 2-Propenoic acid, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(plasma-grafted; sensor coating; automated volatile org. compd. and
mixt. detn. and monitoring in air using laser-induced multiphoton
ionization and surface acoustic wave microsensor array-equipped chem.
sensors)

IT 97-53-0, Eugenol 9002-98-6, Poly(ethylenimine) 9003-20-7, Poly(vinyl
acetate) 9003-27-4, Polyisobutylene 9004-57-3, Ethyl cellulose
24969-06-0, Poly(epichlorohydrin) 25035-84-1, Poly(vinyl propionate)
25791-89-3 28212-48-8, Poly(diphenoxy phosphazene) 135311-44-3
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(sensor coating; automated volatile org. compd. and mixt. detn. and
monitoring in air using laser-induced multiphoton ionization and
surface acoustic wave microsensor array-equipped chem. sensors)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (3) Baker, R; Rev Sci Instrum 1993, V64, P1655
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- (8) Hand, D; Discrimination and Classification 1981
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- (10) Ricco, A; ACS Symposium Series No 561 1994, P264 CAPLUS
- (11) Ricco, P; Technical Digest 1994 Solid-State Sensor and Actuator Workshop 1994, P180
- (12) Rose-Pehrsson, S; Anal Chem 1988, V60, P2801 CAPLUS
- (13) Tanada, T; Ber Bunsenges Phys Chem 1993, V97, P1516 CAPLUS
- (14) Wang, X; Sensors and Actuators 1993, VB13, P455

RN 56-23-5
RN 67-56-1
RN **67-63-0**
RN 67-64-1
RN 67-66-3
RN 71-23-8
RN 71-43-2
RN 78-93-3
RN 79-01-6
RN 108-88-3
RN 110-54-3
RN 110-82-7
RN 127-18-4
RN 464-07-3
RN 756-79-6
RN 1445-75-6
RN 5989-27-5
RN 26635-64-3
RN 24937-05-1
RN 79-10-7
RN 97-53-0
RN 9002-98-6
RN 9003-20-7
RN 9003-27-4
RN 9004-57-3
RN 24969-06-0
RN 25035-84-1
RN 25791-89-3
RN 28212-48-8
RN 135311-44-3

L10 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1998:282379 CAPLUS

DN 128:329869

TI Technique for the removal of residual spin-on-glass (SOG) after full SOG etchback

IN Wu, Lin-june; Yu, Chen-hua Douglas; Lee, Jin-yuan

PA Taiwan Semiconductor Manufacturing Company, Ltd., Taiwan

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM H01L021-4763

NCL 438624000

CC 76-3 (Electric Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5747381	A	19980505	US 1996-599770	19960212
PRAI	US 1996-599770		19960212		
AB	<p>This invention relates to a method for removing residual spin-on-glass (SOG) during a planarization processing step wherein the SOG is used as a sacrificial planarization medium and subjected to a full etchback to an underlying interlevel dielec. (ILD) layer. The SOG is applied over the ILD layer, and etched back into the ILD layer by reactive-ion-etching under conditions of comparable etch rates for both SOG and ILD. At endpoint there some residual pockets of SOG can be present as well as a region of SOG along the edges of the wafer where it is clamped in the etchback tool. The residual SOG must be removed completely to avoid SOG cracking after thermal processing and SOG outgassing during subsequent metal deposition. For this purpose an aq. etch consisting of hydrofluoric acid buffered with ammonium fluoride is used. The etchant compn. chosen exhibits a selectivity for SOG over the ILD glass of greater than 40 making it suitable for removing considerable SOG residues with minimal attack of the ILD.</p>				
ST	spin on glass removal planarization IC				
IT	Etching (anisotropic; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	Sputtering (etching, reactive; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	Glass, processes RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process) (spin on; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	Etching (sputter, reactive; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	Borophosphosilicate glasses RL: PEP (Physical, engineering or chemical process); PROC (Process) (technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	Silicates, processes Siloxanes (nonpolymeric) RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process) (technique for removal of residual spin-on-glass (SOG) after full SOG etchback contg.)				
IT	Integrated circuits MOSFET (transistors) Semiconductor device fabrication (technique for removal of residual spin-on-glass (SOG) after full SOG etchback for)				
IT	Dielectric films (technique for removal of residual spin-on-glass (SOG) formed on an ILD layer)				
IT	Phosphosilicate glasses RL: PEP (Physical, engineering or chemical process); PROC (Process) (technique for removal of residual spin-on-glass (SOG) formed on an ILD layer contg.)				
IT	67-63-0 , Isopropyl alcohol., uses RL: NUU (Other use, unclassified); USES (Uses) (technique for removal of residual spin-on-glass (SOG) after full SOG etchback)				
IT	7631-86-9 , Silica, processes RL: PEP (Physical, engineering or chemical process); PROC (Process)				

(technique for removal of residual spin-on-glass (SOG) formed on an ILD layer contg.)

IT 12125-01-8, Ammonium fluoride
 RL: NUU (Other use, unclassified); USES (Uses)
 (technique for removal of residual spin-on-glass (SOG) hydrofluoric acid buffered with)

IT 75-73-0, Tetrafluoromethane
 RL: NUU (Other use, unclassified); USES (Uses)
 (technique for removal of residual spin-on-glass (SOG) with)

IT 7664-39-3, Hydrofluoric acid, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (technique for removal of residual spin-on-glass (SOG) with ammonium fluoride-buffered)

IT 18130-74-0, Bifluoride (HF21-)
 RL: MSC (Miscellaneous)
 (technique for removal of residual spin-on-glass (SOG) with ammonium fluoride-buffered hydrofluoric acid)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Leong; US 5192697 1993 CAPLUS
 (2) Matsuura; US 5459105 1995 CAPLUS
 (3) Tanigawa; US 5328871 1994

RN 67-63-0
 RN 7631-86-9
 RN 12125-01-8
 RN 75-73-0
 RN 7664-39-3
 RN 18130-74-0

L10 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1999:100665 CAPLUS

DN 130:126985

TI Fluid property investigation by impedance characterization of quartz crystal resonators. Part I: Methodology, crystal screening, and Newtonian fluids

AU Nwankwo, E.; Durning, C. J.

CS DuPont Experimental Station, Advanced process Control and Optimization Group, Wilmington, DE, 19880-0101, USA

SO Sensors and Actuators, A: Physical (1999), A72(2), 99-109
 CODEN: SAAPEB; ISSN: 0924-4247

PB Elsevier Science S.A.

DT Journal

LA English

CC 48-11 (Unit Operations and Processes)
 Section cross-reference(s): 37, 76

AB In the first of this two-part communication, we present a methodol. for the application of thickness shear mode (TSM) quartz crystal resonators (QCR) in fluid property investigation. To this end, we outline a protocol for the prepn. of crystal surfaces for fluid contact and establish a methodol. for the pre-screening of quartz crystals for application in fluid property investigation. We also present a data fitting algorithm which enables the conversion of raw impedance data into equiv. **circuit** parameters. Subsequently, we report on our study of a series of Newtonian fluids (2-propanol/water solns.) by frequency response anal. of the fluid-contacted TSM QCR. The results are analyzed in comparison to theor. predictions presented in an earlier publication. The results show good agreement between the theory and exptl. derived equiv. **circuit** parameters. The influence of fluid elasticity on the impedance response of liq.-contacted thickness-shear mode (TSM) quartz crystal resonators (QCR) is investigated in the second part. Model predictions are compared to exptl. results on a series of a TSM QCR contacted with poly(**dimethylsiloxane**) fractions. The findings

show that with appropriate instrumentation and models to interpret results, TSM QCR can be rapid and effective tools in viscoelastic fluid property investigation.

ST crystal screening quartz resonator fluid property detn; thickness shear mode quartz crystal resonator

IT Algorithm
(data fitting; fluid property detn. by impedance of quartz crystal resonators)

IT Acoustic impedance
Electric impedance

Shear

Thickness

Viscoelastic materials

(fluid property detn. by impedance of quartz crystal resonators)

IT Resonators

(piezoelec.; fluid property detn. by impedance of quartz crystal resonators)

IT 14808-60-7, Quartz, uses

RL: DEV (Device component use); USES (Uses)

(fluid property detn. by impedance of quartz crystal resonators)

IT 67-63-0, 2-Propanol, uses 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)

(fluid property detn. by impedance of quartz crystal resonators)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(2) Bottom, V; Introduction to Quartz Crystal Unit Design 1982

(3) Ikeda, T; Fundamentals of Piezoelectricity 1990

(4) Martin, S; Anal Chem 1993, V65, P2910 CAPLUS

(5) Nomura, T; Anal Chim Acta 1980, V115, P323 CAPLUS

(6) Nwankwo, E; D Eng Sc Dissertation Chemical Engineering Department Columbia University 1996

(7) Nwankwo, E; Rev Sci Instr 1998, V69(6), P2375 CAPLUS

(8) Reed, C; J Appl Phys 1990, V68, P1993 CAPLUS

(9) Salt, D; Hy-Q Handbook of Quartz Crystal Devices 1987

(10) Sauerbrey, G; Z Physik 1959, V155, P206 CAPLUS

(11) Stephan, K; Recommended Data of Selected Compounds and Binary Mixtures 1990, VIV

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RN 14808-60-7

RN 67-63-0

RN 7732-18-5

L10 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2001:1253 CAPLUS

DN 134:79701

TI Process for depositing a low dielectric constant film

IN Moghadam, Farhad; Cheung, David W.; Yieh, Ellie; Xia, Li-qun; Yau, Wai-Fan; Lang, Chi-I.; Jeng, Shin-Puu; Gaillard, Frederick; Venkataraman, Shankar; Nemani, Srinivas D.

PA Applied Materials, Inc., USA

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM H01L021-316

ICS C23C016-40

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 75

FAN.CNT 8

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI EP 1063692 A1 20001227 EP 2000-112820 20000616
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO
US 6413583 B1 20020702 US 1999-338470 19990622
PRAI US 1999-338470 A 19990622 6 054379
US 1998-21788 A2 19980211 6 348725
US 1999-247381 A2 19990210 ?
AB A method is presented for depositing Si oxide layers having a low dielec.
const. by reaction of an organosilicon compd. and a hydroxyl forming
compd. at a substrate temp. .ltorsim.400.degree.. The low dielec. const.
films contain residual C and are useful for gap fill layers, pre-metal
dielec. layers, inter-metal dielec. layers, and shallow trench isolation
dielec. layers in sub-micrometer devices. The hydroxyl compd. can be
prepd. prior to deposition from H2O or an org. compd. The Si oxide layers
are preferably deposited at a substrate temp. .ltorsim.40.degree. onto a
liner layer produced from the organosilicon compd. to provide gap fill
layers having a dielec. const. .ltorsim.3.0. ✓
ST plasma vapor deposition process dielec film
IT Semiconductor devices
(microscale, submicron; process for depositing a low dielec. const.
film)
IT Vapor deposition process
(plasma; process for depositing a low dielec. const. film)
IT Dielectric films
Integrated **circuits**
Semiconductor device fabrication
(process for depositing a low dielec. const. film)
IT 7631-86-9, Silica, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(process for depositing a low dielec. const. film)
IT 64-19-7, Acetic acid, processes **67-63-0**, Isopropyl alcohol,
processes 7722-84-1, Hydrogen peroxide, processes 74087-85-7,
Dimethyldioxirane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
(Process); RACT (Reactant or reagent)
(vapor deposition hydroxyl-forming compd.; process for depositing a low
dielec. const. film)
IT 75-76-3, Tetramethylsilane 78-10-4, Tetraethoxysilane 291-27-0,
1,3,5-Trisilacyclohexane 293-36-7, 1,5-Dioxa-2,4,6,8-
tetrasilacyclooctane 992-94-9, Methylsilane 993-07-7, Trimethylsilane
1111-74-6, Dimethylsilane 1759-88-2 3277-26-7, 1,1,3,3-
Tetramethyldisiloxane 4364-07-2 4405-22-5 4745-36-2
5654-05-7 6166-86-5, 2,4,6,8,10-Pentamethylcyclopentasiloxane
14396-21-5 78570-62-4 234772-32-8 234772-34-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(vapor deposition precursor; process for depositing a low dielec.
const. film)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Applied Materials Inc; WO 9941423 A 1999 CAPLUS
- (2) Ikeda, Y; US 5593741 A 1997 CAPLUS
- (3) Laxman, R; US 5492736 A 1996 CAPLUS
- (4) Mitsubishi Electric Corp; DE 19804375 A 1999 CAPLUS
- (5) Morita, K; US 5360646 A 1994 CAPLUS

RN 7631-86-9

RN 64-19-7

RN **67-63-0**

RN 7722-84-1

RN 74087-85-7

RN 75-76-3

RN 78-10-4

RN 291-27-0
RN 293-36-7
RN 992-94-9
RN 993-07-7
RN 1111-74-6
RN 1759-88-2
RN 3277-26-7
RN 4364-07-2
RN 4405-22-5
RN 4745-36-2
RN 5654-05-7
RN 6166-86-5
RN 14396-21-5
RN 78570-62-4
RN 234772-32-8
RN 234772-34-0

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L13 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:419060 CAPLUS
 DN 133:273888
 TI Covalent bonding of coumarin molecules to sol-gel matrices for organic light-emitting device applications
 AU Karkkainen, Ari H. O.; Hormi, Osmo E. O.; Rantala, Juha T.
 CS VTT Electronics, Oulu, Finland
 SO Proceedings of SPIE-The International Society for Optical Engineering (2000), 3943(Sol-Gel Optics V), 194-209
 CODEN: PSISDG; ISSN: 0277-786X
 PB SPIE-The International Society for Optical Engineering
 DT Journal
 LA English
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 27, 41, 57
 AB Coumarin mols. are widely used as laser dyes and their luminescence properties show a large potential for their use as light emitters in org. light emitting devices. These mols. however are lacking of photo, chem. and thermal stability. At the outset, the fact that when the coumarin or other org. active mols. are covalently bonded to a metal oxide host, the stability properties can be improved. The authors outline the synthesis of several different coumarin-3-carboxylic acids by using a 1-pot synthesis from dipotassium o-methoxybenzylidenemalonates. The authors also outline a preparative route for the synthesis of corresponding coumarin-3-carboxylic amides with a side chain contg. terminal trimethoxysilane functionality, which allows the creation of a covalent bond between the mol. and a Si oxide host matrix. These silylated coumarins are then covalently bonded through a sol-gel method to a developing **siloxane** host matrix. The Si matrix materials were synthesized through hydrolysis and simultaneous condensation of metalalkoxides such as phenylmethyltrimethoxysilane. Coumarin dyes are bonded in- situ to the developing matrix during the prepn. of the matrix. The excitation and emission spectra of these mols. are examd. in liq. phase to evaluate the effect of varying substitution pattern on luminescence characteristics. The photo luminescence characteristics are also measured from a solid thin film to explore the effect of the matrix on emission wavelengths. These materials show potentiality for their applications in thin film electro luminescence devices whose fabrication and properties are finally discussed.
 ST coumarin dye deriv covalent bond **siloxane** sol gel LED; LUMO
 coumarin dye deriv **hybrid siloxane** sol gel LED; HOMO
 coumarin dye deriv **hybrid siloxane** sol gel LED;
 structure luminescence coumarin dye deriv **hybrid siloxane** sol gel; substituent coumarin dye deriv **hybrid siloxane** sol gel luminescence; mass spectra coumarin dye deriv **hybrid siloxane** sol gel; NMR coumarin dye deriv **hybrid siloxane** sol gel; melting point coumarin dye deriv **hybrid siloxane** sol gel; amide coumarin dye deriv **hybrid siloxane** sol gel LED; carboxylic acid coumarin dye deriv **siloxane** sol gel LED
 IT Carboxylic acids, properties
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (coumarin-3-; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)
 IT Amides, properties
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (coumarin-3-carboxylic; covalent bonding of coumarin mols. to sol-gel

matrixes for org. light-emitting device applications)

IT Bond formation
Differential scanning calorimetry
Electroluminescent devices
HOMO (molecular orbital)
LUMO (molecular orbital)
Luminescence
Mass spectra
Melting point
NMR (nuclear magnetic resonance)
Sol-gel processing
Substituent effects
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT **Siloxanes** (nonpolymeric)
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT Dyes
(laser, coumarin; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT Molecular structure-property relationship
(luminescence; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 64-19-7, Acetic acid, uses 110-89-4, Piperidine, uses
RL: CAT (Catalyst use); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 2996-92-1
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 531-81-7, Coumarin-3-carboxylic acid 2085-33-8, Hydroxyquinoline aluminum
RL: PRP (Properties)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 613-45-6P, 2,4-Dimethoxybenzaldehyde 4460-86-0P, 2,4,5-Trimethoxybenzaldehyde 7324-86-9P, Diethyl-2,4-dimethoxybenzylidenemalonate 57724-31-9P, Diethyl-2,4,5-trimethoxybenzylidenemalonate 84562-48-1P, 4-Dimethylamino-2-methoxybenzaldehyde 86726-44-5P 133031-78-4P, Dipotassium-2,4-dimethoxybenzylidenemalonate 133031-81-9P, Dipotassium-2,4,5-trimethoxybenzylidenemalonate 297736-06-2P 297736-07-3P 297736-08-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 20300-59-8P, 7-Methoxycoumarin-3-carboxylic acid 55804-65-4P, Coumarin 343 81017-27-8P 86100-68-7P, 6,7-Dimethoxycoumarin-3-carboxylic acid 122607-15-2P 297736-09-5P 297736-10-8P 297736-11-9P 297736-12-0P 297736-13-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT **67-63-0**, 2-Propanol, reactions 76-05-1, Trifluoroacetic acid, reactions 105-53-3, Diethyl malonate 407-25-0, Trifluoroacetic anhydride 530-62-1, 1,1'-Carbonyldiimidazole 830-79-5,

2,4,6-Trimethoxybenzaldehyde 1310-58-3, Potassium hydroxide, reactions
13822-56-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(covalent bonding of coumarin mols. to sol-gel matrixes for org.
light-emitting device applications)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

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RN 110-89-4
RN 2996-92-1
RN 531-81-7
RN 2085-33-8
RN 613-45-6P
RN 4460-86-0P
RN 7324-86-9P
RN 57724-31-9P
RN 84562-48-1P
RN 86726-44-5P
RN 133031-78-4P
RN 133031-81-9P
RN 297736-06-2P
RN 297736-07-3P
RN 297736-08-4P
RN 20300-59-8P
RN 55804-65-4P
RN 81017-27-8P
RN 86100-68-7P
RN 122607-15-2P
RN 297736-09-5P
RN 297736-10-8P
RN 297736-11-9P
RN 297736-12-0P
RN 297736-13-1P
RN **67-63-0**
RN 76-05-1
RN 105-53-3
RN 407-25-0
RN 530-62-1
RN 830-79-5
RN 1310-58-3
RN 13822-56-5

AN 2002:307198 CAPLUS
 DN 137:116871
 TI **Siloxane**-based **hybrid** glass materials for binary and
 gray-scale mask photoimaging
 AU Karkkainen, Ari H. O.; Rantala, Juha T.; Maaninen, Arto; Jabbour, Ghassan
 E.; Descour, Michael R.
 CS VTT Electronics, Oulu, FIN-90570, Finland
 SO Advanced Materials (Weinheim, Germany) (2002), 14(7), 535-540
 CODEN: ADVMEW; ISSN: 0935-9648
 PB Wiley-VCH Verlag GmbH
 DT Journal
 LA English
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 73
 AB The fabrication of microoptical and optomech. structures by applying
 photoimaging of **hybrid** glass materials is discussed. The
 optical and optomech. structures are fabricated simultaneously in a single
 lithog. step. Gray-scale and binary photomasks have been successfully
 applied for the fabrication of lens arrays to a max. lens sag of 102 .mu.m
 and of optomech. structures to a max. height of 140 .mu.m.
 Alignment-aiding optomech. structures can be patterned simultaneously with
 optical structures in the **hybrid** glass to fabricate microoptical
 elements. No chem. or dry etch transfer of the imaged structures is
 required. The fabricated lenslets and the optomech. structures show high
 surface and optical quality. The fabricated **hybrid** glass
 surfaces can be coated with interference coatings utilizing std.
 deposition procedures. Photoimaging of **hybrid** glass materials
 simplifies the fabrication of the optical components and enables new
 optics integration options.
 ST **hybrid** glass **siloxane** based photoimaging microoptical
 optomech structure; photolithog **hybrid** glass **siloxane**
 based microoptical optomech structure fabrication
 IT Photoimaging materials
 Photolithography
 Surface roughness
 (photoimaging of **siloxane**-based neg-tone **hybrid**
 glass materials in fabrication of microoptical and optomech.
 structures)
 IT **Polysiloxanes**, processes
 RL: PEP (Physical, engineering or chemical process); PYP (Physical
 process); PROC (Process)
 (photoimaging of **siloxane**-based neg-tone **hybrid**
 glass materials in fabrication of microoptical and optomech.
 structures)
 IT Ceramers
Hybrid organic-inorganic materials
 (photoimaging of **siloxane**-based neg-tone **hybrid**
 glass materials in fabrication of microoptical and optomech. structures
 in relation to)
 IT Polymerization
 (photopolymn.; photoimaging of **siloxane**-based neg-tone
hybrid glass materials in fabrication of microoptical and
 optomech. structures)
 IT Microlenses
 (refractive; photoimaging of **siloxane**-based neg-tone
hybrid glass materials in fabrication of microoptical and
 optomech. structures)
 IT 442874-00-2P, Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxy
 silane-trimethylolpropane trimethacrylate copolymer
 RL: PEP (Physical, engineering or chemical process); PYP (Physical
 process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(crosslinked; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 67-63-0, Isopropanol, uses 108-10-1, Methyl isobutyl ketone
 RL: NUU (Other use, unclassified); USES (Uses)
 (developer mixt.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 947-19-3, 1-Hydroxycyclohexylphenyl ketone 162881-26-7
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymn. initiator system; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 94-36-0, Benzoyl peroxide, uses
 RL: CAT (Catalyst use); USES (Uses)
 (prepolymer soln.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 2530-85-0, 3-[Methacryloyloxy]propyl]trimethoxysilane 2996-92-1,
 Phenyltrimethoxysilane 3290-92-4, Trimethylolpropane trimethacrylate
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (prepolymer soln.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

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RN 442874-00-2P

RN 67-63-0

RN 108-10-1

RN 947-19-3

RN 162881-26-7

RN 94-36-0

RN 2530-85-0
RN 2996-92-1
RN 3290-92-4

L13 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002:483594 CAPLUS

DN 137:144003

TI Preparation of inorganic-organic **hybrid** films containing particles using electrophoretic deposition method

AU Yamada, Noriko; Shoji, Hiromasa; Kubo, Yuji; Katayama, Shingo

CS Advanced Technology Research Laboratories, Nippon Steel Corporation, Futtsu, Chiba, 293-8511, Japan

SO Journal of Materials Science (2002), 37(10), 2071-2076
CODEN: JMTSAS; ISSN: 0022-2461

PB Kluwer Academic Publishers

DT Journal

LA English

CC 57-1 (Ceramics)

Section cross-reference(s): 55

AB The composite films of **methylsiloxane** inorg.-org. **hybrid** and MoS₂ particles have successfully been fabricated by electrophoretic deposition of MoS₂ particles in a mixed soln. of Me Et ketone (MEK) and inorg.-org. **hybrid** sol. The addn. of 20 vol% **hybrid** sol into a MEK suspension increased the amt. of MoS₂ deposition twice as much as that of MoS₂ deposition in MEK alone. The fraction of particles deposited on a substrate in MEK-20 vol% sol was estd. to be much larger than that in MEK. The hydrolyzed methyltriethoxysilane in a **hybrid** sol modified the MoS₂ particles, resulting in lower neg. zeta potential, which reduces the repulsion force among particles and makes the incorporation of particles into a deposition film easier. The surface modification also enables the incorporation of particles into a deposit by the interaction of surface modifiers. These factors enhance the incorporation of MoS₂ particles in electrophoretic deposition in MEK-sol.

ST inorg org **hybrid** molybdenum sulfide composite film
electrophoretic deposition; silica gel molybdenum sulfide composite film
electrophoretic deposition

IT Electrophoretic deposition
Zeta potential

(electrophoretic deposition of organically modified silica-MoS₂ particle composite films)

IT Silica gel, preparation

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(organically modified, composite films; electrophoretic deposition of organically modified silica-MoS₂ particle composite films)

IT Ceramers

Hybrid organic-inorganic materials

(silica-molybdenum sulfide composite films; electrophoretic deposition of organically modified silica-MoS₂ particle composite films)

IT 1317-33-5, Molybdenum sulfide (MoS₂), processes

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)

(composite films; electrophoretic deposition of organically modified silica-MoS₂ particle composite films)

IT 60676-86-0P, Vitreous silica

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(gel-glass, organically modified, composite films; electrophoretic deposition of organically modified silica-MoS₂ particle composite

films)
 IT 2031-67-6, Silane, triethoxymethyl-
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (precursor; electrophoretic deposition of organically modified
 silica-MoS2 particle composite films)
 IT 64-17-5, Ethanol, uses **67-63-0**, 2-Propanol, uses 67-64-1,
 Acetone, uses 78-93-3, Methyl ethyl ketone, uses 108-10-1, Methyl
 isobutyl ketone 110-80-5, 2-Ethoxyethanol 123-54-6, Acetylacetone,
 uses 141-97-9, Ethyl acetoacetate
 RL: MOA (Modifier or additive use); USES (Uses)
 (solvent; electrophoretic deposition of organically modified
 silica-MoS2 particle composite films)
 IT 11109-50-5, Sus 304
 RL: NUU (Other use, unclassified); USES (Uses)
 (substrates; electrophoretic deposition of organically modified
 silica-MoS2 particle composite films)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
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RN 1317-33-5
 RN 60676-86-0P
 RN 2031-67-6
 RN 64-17-5
 RN **67-63-0**
 RN 67-64-1
 RN 78-93-3
 RN 108-10-1
 RN 110-80-5
 RN 123-54-6
 RN 141-97-9
 RN 11109-50-5

L13 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1998:204034 CAPLUS
 DN 129:33730

TI Electrochemical impedance studies of ~~hybrids~~ of
 perfluorosulfonic acid ionomer and silicon oxide by sol-gel reaction from
 solution

AU Zoppi, R. A.; Nunes, S. P.
 CS Instituto de Quimica, Universidade Estadual de Campinas, CEP 13083-970,
 Campinas, Brazil
 SO Journal of Electroanalytical Chemistry (1998), 445(1-2), 39-45

PB Elsevier Science S.A.

DT Journal

LA English

CC 72-3 (Electrochemistry)

Section cross-reference(s): 37, 76

- AB **Hybrids** of Nafion and silica were prepd. from soln., growing the inorg. phase by hydrolysis/condensation of alkoxy silanes. Using tetraethoxysilane (TEOS) as the inorg. precursor, transparent and rigid films were obtained. Substituting part of the TEOS (20 wt% substitution by 1,1,3,3- tetramethyl-1,3-**diethoxydisiloxane** (TMDES) more flexible films were obtained. These films were translucent and showed a phase segregation which was clearly obsd. by transmission electron microscopy. The ionic cond. of the **hybrids** was measured by electrochem. impedance spectroscopy using two stainless steel electrodes, a frequency range of 0.1 to 105 Hz, and temps. from 25 to 100.degree.C. Samples were also characterized by modulated differential scanning calorimetry.
- ST **hybrid** material composite ionic conductor Nafion; silica nafion
- IT **hybrid** hydrolysis condensation alkoxysilanes
- IT Spectroscopy
(energy-dispersive; of matrix and domain in Nafion/TEOS/TMDES **hybrids**)
- IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(fluorine- and sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)
- IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(fluorine-contg., sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)
- IT Ionic conductivity
(for Nafion/TEOS/TMDES systems)
- IT Activation energy
(for distribution of free vol. in Nafion/TEOS/TMDES **hybrids**)
- IT Differential scanning calorimetry
(for pure Nafion)
- IT Ionomers
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(**hybrids** with silicon oxide by sol-gel reaction from soln.)
- IT Phase separation
(in films of **hybrids** of Nafion/TEOS/TMDES by TEM)
- IT Condensation reaction
Hydrolysis
(of alkoxysilanes in formation of **hybrids** of Nafion/TEOS/TMDES)
- IT Electric impedance
(of **hybrids** films of silica with perfluorosulfonic acid ionomer)
- IT Films
(of **hybrids** of Nafion/TEOS/TMDES; formation and properties)
- IT Surface structure
(of pure Nafion films and Nafion/TEOS/TMDES **hybrids** by TEM)
- IT Fluoropolymers, properties
Fluoropolymers, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(polyoxyalkylene-, sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Ionomers
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (polyoxyalkylenes, fluorine- and sulfo-contg.; **hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Phase transition
 (reversible, exothermic: related to cluster reorganization)

IT 7631-86-9, Silica, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (**hybrids** with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)

IT 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (in fabrication of **hybrids** of silica with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)

IT **67-63-0**, Iso-propanol, properties 71-23-8, n-Propanol, properties 7647-01-0, Hydrochloric acid, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (in fabrication of **hybrids** of silica with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)

IT 18420-09-2, 1,1,3,3-Tetramethyl-1,3-**diethoxydisiloxane**
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (precursor for SiO₂ obtaining in formation of **hybrids** of Nafion and silica)

IT 78-10-4, Tetraethoxysilane
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (precursor for SiO₂ obtaining in formation of **hybrids** of Nafion and silica)

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RN 7631-86-9
RN 7732-18-5
RN **67-63-0**
RN 71-23-8
RN 7647-01-0
RN 18420-09-2
RN 78-10-4

L13 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1989:81194 CAPLUS

DN 110:81194

TI Solvent extraction of inorganic/organic **hybrid** gels prepared by the sol-gel method

AU Kojiya, Shinzo; Ochiai, Kenichiro; Yamashita, Shinzo

CS Dep. Chem., Kyoto Inst. Technol., Kyoto, 606, Japan

SO Chemistry Express (1988), 3(10), 631-4

CODEN: CHEXEU; ISSN: 0911-9566

DT Journal

LA Japanese

CC 57-9 (Ceramics)

AB Solvent extns. were carried out on inorg./org. **hybrid** gels prep'd. by the sol-gel method. Incorporation of hydroxy-terminated poly(**dimethylsiloxane**) into glass matrix was nonquant. About 20% of the original polymer remained unreacted and could be extd. TG anal. of the gels indicated that the incorporated polymer has better thermal stability than the free polymer.

ST inorg org **hybrid** sol gel; solvent extn inorg org gel

hybrid

IT Gels

(**hybrid**, inorg.-org., solvent extn. from)

IT Polymers, uses and miscellaneous

RL: USES (Uses)

(inorg. gel **hybrid** with, solvent extn. from)

IT **67-63-0**, 2-Propanol, uses and miscellaneous 75-09-2,

Dichloromethane, uses and miscellaneous 108-88-3, Toluene, uses and

miscellaneous 109-99-9, THF, uses and miscellaneous 110-82-7,

Cyclohexane, uses and miscellaneous 123-91-1, Dioxane, uses and miscellaneous

RL: USES (Uses)

(extn. of, from inorg.-org. **hybrid** gels)

RN **67-63-0**

RN 75-09-2

RN 108-88-3

RN 109-99-9

RN 110-82-7

RN 123-91-1

L13 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2001:737029 CAPLUS

DN 135:305276

TI Primer for use under a photocatalytic coating layer and coated articles using the primer

IN Nakanishi, Makoto; Kojima, Eiichi; Kanamori, Taro; Hashiguchi, Yuichi

PA Toto Ltd., Japan; JSR Ltd.

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D201-00

ICS B01J035-02; B01J037-02; B32B009-00; C09D005-00; C09D143-00; C09D183-04

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001279184	A2	20011010	JP 2000-97952	20000331
PRAI	JP 2000-97952		20000331		

AB The primer can prevent the erosion of coated articles such as exterior plastics due to the photolytic attack, and contains **hybrid** org.-inorg. materials and solvents which have SP value difference with that of the substrate of 0.2-1.6. Thus, mixing PMMA 36 with a **polysiloxane** 24, i-PrOH (SP value 11.50) 285, BuOAc (SP value 8.50) 285, MEK (SP value 9.30) 285 and EtOAc (SP value 9.10) 285 parts gave a primer which was coated on the cleaned surface of a Sumipex Clear 000 (PMMA; SP value 9.10) panel to a wet pickup wt. of 20-25 g/m², dried at 80.degree. for 30 min with hot air, cooled to room temp., over-coated with a photocatalytic coating contg. ST-K 01 and ST-K 03 and dried to give a panel with lasting wettability and coat film adhesion.

ST photocatalytic coating protection primer **hybrid** org inorg material

IT Photolysis catalysts
(coatings; primer for use under a photolytic coating layer and coated articles)

IT **Polysiloxanes**, uses
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(**hybrid** org.-inorg. materials for primer; primer for use under a photolytic coating layer and coated articles)

IT Solvents
(org.; primer for use under a photolytic coating layer and coated articles)

IT **Hybrid** organic-inorganic materials
Primers (paints)
Solvent effect
(primer for use under a photolytic coating layer and coated articles)

IT 9011-14-7, PMMA
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(**hybrid** org.-inorg. materials for primer; primer for use under a photolytic coating layer and coated articles)

IT 202936-29-6, ST-K 03 220946-52-1, ST-K 01
RL: TEM (Technical or engineered material use); USES (Uses)
(photocatalytic coatings; primer for use under a photolytic coating layer and coated articles)

IT **67-63-0**, Isopropanol, uses 78-93-3, MEK, uses 123-86-4, Butyl acetate 141-78-6, Ethyl acetate, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvents of specified soly. parameter; primer for use under a photolytic coating layer and coated articles)

RN 9011-14-7
RN 202936-29-6
RN 220946-52-1
RN **67-63-0**
RN 78-93-3
RN 123-86-4
RN 141-78-6

L13 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:390437 CAPLUS

DN 131:40530

TI Method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes

IN Gut, Ivo Glynne; Berlin, Kurt; Lehrach, Hans
 PA Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., Germany
 SO PCT Int. Appl., 51 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C12Q001-68
 CC 3-1 (Biochemical Genetics)
 Section cross-reference(s): 7, 9

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9929898	A2	19990617	WO 1998-EP7911	19981204
	WO 9929898	A3	19991028		
	W: CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2312052	AA	19990617	CA 1998-2312052	19981204
	EP 1036202	A2	20000920	EP 1998-966608	19981204
	EP 1036202	B1	20020502		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, IE, FI				
	JP 2001526381	T2	20011218	JP 2000-524469	19981204
	AT 217028	E	20020515	AT 1998-966608	19981204
	ES 2173670	T3	20021016	ES 1998-966608	19981204
PRAI	EP 1997-121471	A	19971205		
	WO 1998-EP7911	W	19981204		

AB A method for detecting a nucleotide sequence in a nucleic acid mol. by means of **hybridization** against an ordered array of charged tag-labeled probes using MALDI mass spectrometry is described. One advantage of the method is that it provides for simultaneous characterization of a no. of unknown nucleic acid mols. using this array of probes. In particular peptide analogs of nucleic acids, esp. peptide nucleic acids, that showed improved efficiency of desorption are used as probes. The invention also relates to a kit contg. the probes and/or a sample carrier, optionally with nucleic acids bonded thereto.

ST MALDI immobilized probe DNA sequencing

IT Proteins, specific or class

RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(gene 32, in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Peptide nucleic acids

Phosphorothioate oligonucleotides

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (immobilized, as desorbable probes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Amines, reactions

Antibodies

Epoxides

Polysiloxanes, reactions

Silanes

Thiols (organic), reactions

RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT DNA sequence analysis

(mass spectrometric; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Nucleic acid **hybridization**
(method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Combinatorial library
(of charge tag labeled probes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Immobilization, biochemical
(of probes on matrixes for MALDI; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(ordered arrays, charge labeled; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Laser ionization mass spectrometry
(photodesorption, matrix-assisted; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Laser desorption mass spectrometry
(photoionization, matrix-assisted; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 1519-55-7, .alpha.-Cyano-4-methoxycinnamic acid 227080-33-3
227080-34-4
RL: DEV (Device component use); USES (Uses)
(as matrix for MALDI; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses **67-63-0**,
2-Propanol, uses 67-64-1, 2-Propanone, uses 75-05-8, Acetonitrile,
uses 7732-18-5, Water, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(as solvent; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 58-85-5, Biotin 9013-20-1, Streptavidin
RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

RN 1519-55-7
RN 227080-33-3
RN 227080-34-4
RN 64-17-5
RN 67-56-1
RN **67-63-0**
RN 67-64-1
RN 75-05-8
RN 7732-18-5
RN 58-85-5
RN 9013-20-1

DN 136:309566
 TI A hydrophobic gel for epoxidation of olefins with organic peroxides
 AU Karli, Alfonsus; Larsen, Gustavo
 CS Department of Chemical Engineering, University of Nebraska, Lincoln, NE,
 68588-0126, USA
 SO Catalysis Letters (2001), 77(1-3), 107-111
 CODEN: CALLEER; ISSN: 1011-372X
 PB Kluwer Academic/Plenum Publishers
 DT Journal
 LA English
 CC 22-7 (Physical Organic Chemistry)
 Section cross-reference(s): 21, 67
 AB The epoxidn. of cyclooctene by tert-Bu hydroperoxide (t-BuOOH) over a
 TiO₂-SiO₂ xerogel made from a permethylated **cyclooligosiloxane**,
 tetraethylorthosilicate, and a Ti chloroalkoxide, was carried out in
 acetonitrile as the reaction solvent. The org. moieties of the
hybrid gel (in this case, -Me groups) and the Ti content of the
 catalyst appear to be stable on prolonged exposure to the reaction medium.
 Besides very good stability, the **hybrid** catalyst in this study
 displays 100% selectivity toward cyclooctene epoxide prodn. Solid state
 29Si magic angle spinning NMR (29Si MASNMR), diffuse reflectance FTIR
 spectroscopy (DRIFTS), and chem. anal. were used to monitor the stability
 of the **hybrid** material. The kinetics of olefin epoxidn. was
 studied in a batch reactor in the 313-343 K range.
 ST hydrophobic epoxidn olefin org peroxide
 IT MAS NMR spectroscopy
 (CP, hydrophobic gel 29Si; hydrophobic gel for epoxidn. of olefins with
 org. peroxides)
 IT Diffuse reflectance IR spectroscopy
 (Fourier-transform, hydrophobic gel; hydrophobic gel for epoxidn. of
 olefins with org. peroxides)
 IT **Polysiloxanes**, reactions
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES
 (Uses)
 (gel precursor; hydrophobic gel for epoxidn. of olefins with org.
 peroxides)
 IT Activation energy
 Epoxidation
 Epoxidation catalysts
 Epoxidation kinetics
 Transition state structure
 Xerogels
 (hydrophobic gel for epoxidn. of olefins with org. peroxides)
 IT Alkenes, reactions
 Hydroperoxides
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (hydrophobic gel for epoxidn. of olefins with org. peroxides)
 IT MAS NMR spectroscopy
 (hydrophobic gel 29Si; hydrophobic gel for epoxidn. of olefins with
 org. peroxides)
 IT IR spectra
 (hydrophobic gel; hydrophobic gel for epoxidn. of olefins with org.
 peroxides)
 IT Gels
 (hydrophobic; hydrophobic gel for epoxidn. of olefins with org.
 peroxides)
 IT Peroxides, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (org.; hydrophobic gel for epoxidn. of olefins with org. peroxides)
 IT Adsorption
 (oxidant on gel; hydrophobic gel for epoxidn. of olefins with org.
 peroxides)

IT Methyl group
(surface tied to **hybrid** hydrophobic; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 75-05-8, Acetonitrile, uses
RL: NUU (Other use, unclassified); USES (Uses)
(better solvent than alcs.; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT **67-63-0**, Isopropanol, reactions 7550-45-0, Titanium tetrachloride, reactions
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(conversion to hydrophobic gel precursor; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 7722-84-1, Hydrogen peroxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(generation of oxygen in side reaction; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 75-91-2, tert-Butyl hydroperoxide 931-87-3, cis-Cyclooctene
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 286-62-4, Cyclooctene epoxide
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 78-10-4, TEOS 541-05-9
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(hydrophobic gel precursor; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT 67-56-1, Methanol, uses 75-65-0, tert-Butanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(oxidn. of solvent; hydrophobic gel for epoxidn. of olefins with org. peroxides)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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- (2) Blasco, T; J Catal 1995, V156, P65 CAPLUS
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- (8) Holmes, S; J Catal 1998, V176, P173 CAPLUS
- (9) Larsen, G; J Non-Cryst Sol 2000, V271, P1 CAPLUS
- (10) Larsen, G; J Non-Cryst Sol 2001, V279, P161 CAPLUS
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- (16) Sanchez, C; New J Chem 1994, V18, P1007 CAPLUS
- (17) Schubert, U; New J Chem 1994, V18, P1049 CAPLUS
- (18) Taramasso, M; US 4410501 1983 CAPLUS
- (19) van der Waal, J; Appl Catal A 1998, V167, P331 CAPLUS
- (20) Vanoppen, D; Angew Chem 1995, V34, P560 CAPLUS
- (21) Vu, D; Thesis University of Nebraska-Lincoln 1999

RN 75-05-8
RN **67-63-0**
RN 7550-45-0
RN 7722-84-1
RN 75-91-2

RN 931-87-3
RN 286-62-4
RN 78-10-4
RN 541-05-9
RN 67-56-1
RN 75-65-0

L13 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000:517764 CAPLUS

DN 133:274951

TI Combinatorial methods in sol-gel technology

AU Rantala, Juha T.; Kololuoma, Terho; Kivimaki, L.

CS VTT Electronics/Infotech Oulu, Oulu, Finland

SO Proceedings of SPIE-The International Society for Optical Engineering
(2000), 3941(Combinatorial and Composition Spread Techniques in Materials
and Device Development), 11-18
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 76-5 (Electric Phenomena)

Section cross-reference(s): 56

AB Sol-gel processing consists several variable parameters during materials
synthesis and post processing steps. The sol-gel synthesis is rather
sensitive for the parameters such as pH, temp., type of catalyst, reaction
time etc. However, this sensitivity can be taken as an advantage when
developing and studying new materials and their properties. Furthermore,
since the sol-gel technol. mainly describes the fabrication of solid state
materials from a liq. phase by applying metal alkoxides or metal salts as
precursors, the post processing such as sintering has crit. effects on the
final form and properties of the solid material. Combinatorial chem. and
methods are valuable tools to est. the effects of different variables and
to build-up combinatorial libraries for the sol-gel technique. This paper
generally describes potentials and the usage motivation of combinatorial
chem. in the sol-gel technol. by taking into account some major steps in
the synthesis and processing which are valuable for the estn. of the final
product properties. Different kind of post processing steps in the
combinatorial manner are studied in details. As an example the post
processing of sol-gel derived semiconductor oxides and photosensitivity of
hybrid sol-gel glasses are presented. The combinatorial treatment
and measurement methods for these materials are explained.

ST photocond antimony doped sol gel tin oxide glass; metal alkoxide salt
sintering semiconductor oxide

IT Semiconductor films

(Sb doped SnO₂; photocond. of)

IT Dopants

(Sb; effects on photocond. of Sb doped sol-gel SnO₂)

IT Detergents

(Triton X100; in sol-gel processing of SnO₂)

IT Refractive index

(and photocond. of Sb doped sol-gel SnO₂)

IT Coating process

(dip; in sol-gel processing of SnO₂)

IT Thickness

(films; effects on photocond. of Sb doped sol-gel SnO₂)

IT Combinatorial chemistry

Hydrolysis

Photolithography

Sintering

(in sol-gel processing of SnO₂)

IT Alkali metal salts

Metal alkoxides

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in sol-gel processing of SnO₂)

IT Glass substrates
(lime; in photocond. of Sb doped sol-gel SnO₂)

IT Composites
(mol.; photocond. of Sb doped sol-gel SnO₂)

IT Photoconductivity
Sol-gel processing
(of Sb doped sol-gel SnO₂)

IT Crosslinking
(photochem.; in sol-gel processing of SnO₂)

IT Electric conductivity
(photocond. of Sb doped sol-gel SnO₂)

IT Zirconates
Zirconates
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(siloxane-, organically modified; photocond. of Sb doped sol-gel SnO₂)

IT Coating process
(spin; in sol-gel processing of SnO₂)

IT Coating process
(spray; in sol-gel processing of SnO₂)

IT Borosilicate glasses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate; in photocond. of Sb doped sol-gel SnO₂)

IT **Polysiloxanes**, properties
Polysiloxanes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(zirconate-, organically modified; photocond. of Sb doped sol-gel SnO₂)

IT 7732-18-5, Water, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(deionized; in sol-gel processing of SnO₂)

IT 9002-93-1, Triton X100
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(detergent; in sol-gel processing of SnO₂)

IT 10025-91-9, Antimony chloride (SbCl₃)
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(dopant source; in sol-gel processing of SnO₂)

IT 7440-36-0, Antimony, uses
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; effects on photocond. of Sb doped sol-gel SnO₂)

IT 67-63-0, Isopropanol, processes 67-64-1, Acetone, processes
79-41-4, Methacrylic acid, processes 2171-98-4, Zirconium isopropoxide
2530-85-0 24623-80-1, Tin chloride (SnCl₄) tetrahydrate
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in sol-gel processing of SnO₂)

IT 162881-26-7, Irgacure 819
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(photo initiator; in sol-gel processing of SnO₂)

IT 7440-37-1, Argon, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(plasma treatment; effects on photocond. of Sb doped sol-gel SnO₂)

IT 1332-29-2P, Tin oxide
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN
(Synthetic preparation); PREP (Preparation); PROC (Process)
(sol-gel; photocond. of)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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RN 7732-18-5
RN 9002-93-1
RN 10025-91-9
RN 7440-36-0
RN 67-63-0
RN 67-64-1
RN 79-41-4
RN 2171-98-4
RN 2530-85-0
RN 24623-80-1
RN 162881-26-7
RN 7440-37-1
RN 1332-29-2P

L13 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:206999 CAPLUS
DN 130:268425
TI Rubber-ceramic composites and their manufacture
IN Hamanaka, Seiko; Nishimoto, Kazuo
PA Nichias Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08J003-20
ICS C08K003-22; C08L021-00; C08L083-04; C08C019-26
CC 39-9 (Synthetic Elastomers and Natural Rubber)
Section cross-reference(s): 57

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 11080373	A2	19990326	JP 1997-242752	19970908
	JP 3295023	B2	20020624		
PRAI	JP 1997-242752		19970908		

AB Rubbers dissolved in org. solvents or liq. rubbers are mixed with organometallic compds. and then subjected to sol-gel reaction so that oxides of the metals derived from the organometallic compds. are formed and dispersed finely, polymn. occurs, and chem. bonds are formed between the organometallic compds. and rubbers. Thus, SBR rubber was dissolved in THF, mixed with 120.0 phr (.gamma.-isocyanatopropyl)triethoxysilane, gelled with H2O, ammonia, and NH4F, dried, further mixed with S 1.5, ZnO 5.0, and vulcanizing accelerators 3.0 phr, and press-vulcanized to give a sheet showing improved heat resistance compared to an SBR sheet contg. 19.0 phr white carbon.

ST SBR rubber ceramic composite manuf; isocyanatopropyltriethoxysilane rubber composite heat resistance

IT Cold-resistant materials
Heat-resistant materials
Hybrid organic-inorganic materials
Sol-gel processing
Transparent materials
(manuf. of rubber-ceramic composites by sol-gel process)

IT Oxides (inorganic), preparation
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. of rubber-ceramic composites by sol-gel process)

IT EPDM rubber
 Silicone rubber, preparation
 Styrene-butadiene rubber, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (reaction products, with organometallic compds.; manuf. of
 rubber-ceramic composites by sol-gel process)

IT **Polysiloxanes**, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (reaction products, with rubber; manuf. of rubber-ceramic composites by
 sol-gel process)

IT **67-63-ODP**, Isopropanol, polytitanate derivs., reaction products
 with rubber 546-68-9DP, Titanium tetraisopropoxide, reaction products
 with rubber 2269-22-9DP, reaction products with rubber 4420-74-ODP,
 (.gamma.-Mercaptopropyl)trimethoxysilane, reaction products with rubber
 9016-00-6DP, Dimethyl **siloxane**, sru, reaction products with
 rubber 24801-88-5DP, reaction products with rubber 31900-57-9DP,
 Dimethylsilanediol homopolymer, reaction products with rubber
 40372-72-3DP, Bis(3-triethoxysilylpropyl)tetrasulfane, reaction products
 with rubber
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. of rubber-ceramic composites by sol-gel process)

IT 9003-55-8P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (styrene-butadiene rubber, reaction products, with organometallic
 compds.; manuf. of rubber-ceramic composites by sol-gel process)

RN **67-63-ODP**
 RN 546-68-9DP
 RN 2269-22-9DP
 RN 4420-74-ODP
 RN 9016-00-6DP
 RN 24801-88-5DP
 RN 31900-57-9DP
 RN 40372-72-3DP
 RN 9003-55-8P

L13 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1999:502748 CAPLUS
 DN 131:149863
 TI Molecular sieving silica membrane fabrication process
 IN Raman, Narayan K.; Brinker, Charles Jeffrey
 PA Gas Research Institute, USA; Sandia National Laboratories
 SO U.S., 18 pp.
 CODEN: USXXAM

DT Patent
 LA English
 IC ICM B05D005-00
 NCL 427244000

CC 66-4 (Surface Chemistry and Colloids)
 Section cross-reference(s): 36, 78

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5935646	A	19990810	US 1998-13346	19980126
	US 5770275	A	19980623	US 1996-702745	19960823
PRAI	US 1996-702745		19960823		

AB A process for producing a mol. sieve silica membrane comprising depositing
 a **hybrid** org.-inorg. polymer comprising at least one org.
 constituent and at least one inorg. constituent on a porous substrate
 material and removing at least a portion of the at least one org.

constituent of the **hybrid** org.-inorg. polymer, forming a porous film.

ST silica membrane mol sieve org inorg polymer

IT Permeation

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)

IT **Polysiloxanes**, properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)

IT Molecular sieves

Pore size

Pore size distribution

Pore structure

Porosity

Porous materials

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES det'd. by mol. sieving of various gas mols.)

IT Xerogels

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES xerogels)

IT **67-63-0**, Isopropanol, uses 75-65-0, tert-Butanol, uses 27129-87-9, 3,5-Dimethyl benzyl alcohol

RL: NUU (Other use, unclassified); USES (Uses)

(mol. probing of surface derivatized silica membranes of TEOS and MTES with)

IT 1344-28-1, Alumina, uses

RL: NUU (Other use, unclassified); USES (Uses)

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)

IT 78-10-4, Tetraethoxysilane 2031-67-6, Methyltriethoxysilane

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)

IT 88029-70-3P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)

IT 74-82-8, Methane, properties 124-38-9, Carbon dioxide, properties

2551-62-4, Sulfur hexafluoride 7440-59-7, Helium, properties

7727-37-9, Nitrogen, properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(permeance and pore size and structure properties of silica membranes prep'd. by copolymn. of TEOS and MTES det'd. by mol. sieving of)

IT 2996-92-1, Phenyltrimethoxysilane

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(surface derivatization of silica membranes prep'd. by copolymn. of TEOS and MTES det'd. by addn. of during the polymn. process)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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 RN 75-65-0
 RN 27129-87-9
 RN 1344-28-1
 RN 78-10-4
 RN 2031-67-6
 RN 88029-70-3P
 RN 74-82-8
 RN 124-38-9
 RN 2551-62-4
 RN 7440-59-7
 RN 7727-37-9
 RN 2996-92-1

L13 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:66185 CAPLUS
 DN 128:116668

TI Composite pervaporation membrane with ceramic support structure
 PA Mauz, Matthias, Germany
 SO Ger. Offen., 10 pp.
 CODEN: GWXXBX

DT Patent
 LA German

IC ICM B01D069-12
 ICS B01D061-36; B01D001-00; B01D005-00; C07B063-00

CC 47-2 (Apparatus and Plant Equipment)
 Section cross-reference(s): 38, 57, 80

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19629061	A1	19980122	DE 1996-19629061	19960719
PRAI	DE 1996-19629061		19960719		

AB The composite membrane is a pore-free polymer cover layer on a porous ceramic support layer having pore size 0.005-0.5 .mu.m. The org. solvent-selective polymer cover layer can be a **polydimethylsiloxane**, polyamide, or polyether. The sides of the ceramic layer are sealed with an epoxy resin or polyurethane. The membrane has good thermal and chem. stability, and can be used for pervaporation of solvent mixts. in an anal. lab., e.g., HPLC solvents. It may be used for **hybrid** distn.-thermal sepn. methods.

ST pervaporation membrane ceramic support analytical solvent
 IT Ceramic membranes
 Solvents

(composite pervaporation membrane with ceramic support structure)

IT Polyamides, uses
 Polyethers, uses

RL: DEV (Device component use); USES (Uses)
 (composite pervaporation membrane with ceramic support structure)
 IT Epoxy resins, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (composite pervaporation membrane with ceramic support structure)
 IT Polyurethanes, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (composite pervaporation membrane with ceramic support structure)
 IT **Polysiloxanes**, uses
 RL: DEV (Device component use); USES (Uses)
 (di-Me; composite pervaporation membrane with ceramic support structure)
 IT Pervaporation
 (membranes; composite pervaporation membrane with ceramic support structure)
 IT 56-81-5, Glycerin, properties 64-18-6, Formic acid, properties
67-63-0, Isopropanol, properties 67-64-1, Acetone, properties
 77-92-9, Citric acid, properties 141-78-6, Ethyl acetate, properties
 7647-01-0, Hydrochloric acid, properties 7664-93-9, Sulfuric acid, properties
 RL: PRP (Properties)
 (composite pervaporation membrane with ceramic support structure)
 IT 64-17-5P, Ethanol, preparation 64-19-7P, Acetic acid, preparation
 67-56-1P, Methanol, preparation 75-05-8P, Acetonitrile, preparation
 142-82-5P, Heptane, preparation 7732-18-5P, Water, preparation
 RL: PUR (Purification or recovery); PREP (Preparation)
 (composite pervaporation membrane with ceramic support structure)
 RN 56-81-5
 RN 64-18-6
 RN **67-63-0**
 RN 67-64-1
 RN 77-92-9
 RN 141-78-6
 RN 7647-01-0
 RN 7664-93-9
 RN 64-17-5P
 RN 64-19-7P
 RN 67-56-1P
 RN 75-05-8P
 RN 142-82-5P
 RN 7732-18-5P

 L13 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1998:41700 CAPLUS
 DN 128:119648
 TI Extraction process for producing poly(DL-lactide-glycolide) microspheres
 IN Van Hamont, John; Thies, Curt; Reid, Robert H.; McQueen, Charles E.;
 Setterstrom, Jean A.
 PA United States Dept. of the Army, USA
 SO U.S., 9 pp., Cont.-in-part of U.S. Ser. No. 242,960.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM A61K009-50
 NCL 424501000
 CC 63-6 (Pharmaceuticals)
 FAN.CNT 13

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5705197	A	19980106	US 1996-698896	19960816
	US 5693343	A	19971202	US 1994-242960	19940516
	US 6447796	B1	20020910	US 1997-920326	19970821

PRAI	US	1994-242960	A2	19940516
	US	1984-590308	A2	19840316
	US	1990-493597	B2	19900315
	US	1990-521945	B2	19900511
	US	1991-690485	B2	19910424
	US	1991-805721	B2	19911121
	US	1992-867301	A2	19920410
	US	1995-446148	A2	19950522
	US	1995-446149	B2	19950522
	US	1996-590973	B2	19960124
	US	1996-675895	A2	19960705
	US	1996-698896	A2	19960816
	US	1997-789734	A2	19970127

AB A **hybrid** evapn.-extn. process for prepg. microspheres of a poly(DL-lactide-glycolide) (I) biodegradable polymer, comprising: (a) prepg. a lyophilized biol. active material-sucrose matrix; adding acetonitrile solvent to biol. active material-sucrose matrix to form a soln.; (b) prepg. a soln. of a biodegradable I by adding acetonitrile solvent to the polymer; (c) adding the biodegradable I acetonitrile soln. to the biol. active material-sucrose acetonitrile soln.; (d) adding with stirring an oil contg. lecithin to the I-sucrose-biol. active material soln. to evap. acetonitrile and form an emulsion contg. microspheres of I biodegradable polymers; (e) adding the emulsion from step d. into a solvent selected from heptane, hexane, pentane or isopropanol; and (f) collecting microspheres of I biodegradable polymers of from 1.0 to about 10.0 .mu.m after filtration and washing with a fresh solvent selected from heptane, hexane, pentane or isopropanol. I microspheres between 5-10.mu.m, with very little aggregation were prepd. according to above method.

ST pharmaceutical microsphere extn polylactide polyglycolide

IT Antigens

Lecithins

Paraffin oils

Polysiloxanes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Drug delivery systems

(freeze-dried; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Lubricating oils

(machine; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Drug delivery systems

(microspheres; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT 57-50-1, biological studies **67-63-0**, Isopropanol;; biological studies 75-05-8, Acetonitrile, biological studies 109-66-0, Pentane, biological studies 110-54-3, Hexane, biological studies 142-82-5, Heptane, biological studies 26780-50-7, Poly(DL-lactide-glycolide)

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(extn. process for producing poly(DL-lactide-glycolide) microspheres)

RN 57-50-1

RN **67-63-0**

RN 75-05-8

RN 109-66-0

RN 110-54-3

RN 142-82-5

RN 26780-50-7

L13 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:539347 CAPLUS

DN 129:277633

TI Meerwein-Ponndorf-Verley reductions mediated by lanthanide-alkoxide-functionalized mesoporous silicates
 AU Anwander, R.; Palm, C.
 CS Institut für Technische Chemie I, Universität Stuttgart, Stuttgart, D-70569, Germany
 SO Studies in Surface Science and Catalysis (1998), 117 (Mesoporous Molecular Sieves 1998), 413-420
 CODEN: SSCTDM; ISSN: 0167-2991
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 24, 67
 AB Lanthanide alkoxide moieties were grafted onto mesoporous silicate MCM-41 via surface **siloxide** linkage. Two immobilization procedures were used: treatment of dehydrated MCM-41 with rare earth alkoxide solns. and prepn. of silylamide derivs. in heterogeneous media. The latter procedure facilitated introduction of a wide range of alkoxide ligands via ligand exchange reactions of MCM-41/rare earth amide **hybrid** species with various alcs. The materials were characterized by elemental anal. and FTIR spectroscopy. Nitrogen physisorption measurements revealed that the effective mean pore diam. and pore vol. were markedly affected by the steric bulk of alkoxide ligands. The **hybrid** materials are efficient precatalysts in the Meerwein-Ponndorf-Verley redn. of 4-tert-butylcyclohexanone to the corresponding 4-tert-butylcyclohexanol isomers. The transformations were conducted in 2-propanol and conversions >95 % were accomplished within five hours even at ambient temp., and without formation of any side products.
 ST lanthanide alkoxide zeolite catalyst redn; ketone redn alc lanthanide mesoporous silicate; Meerwein Ponndorf Verley redn silicate catalyst
 IT Rare earth complexes
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (alc.; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT Zeolite MCM-41
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (lanthanide-alkoxide-functionalized; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT Porous materials
 (mesoporous; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT Dehydration reaction
 Physisorption
 Reduction
 Substitution reaction, coordinative
 (neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT Alcohols, preparation
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (rare earth complexes; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT 41836-23-1DP, Tris[bis(trimethylsilyl)amido]neodymium, mesoporous silicate derivs. 142042-03-3DP, mesoporous silicate derivs.
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
 IT 98-52-2P, 4-tert-Butylcyclohexanol

RL: IMF (Industrial manufacture); PREP (Preparation)

(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)

IT 64-17-5, Ethanol, reactions 67-56-1, Methanol, reactions **67-63-0**, Isopropyl alcohol, reactions 75-84-3, Neopentyl alcohol 98-53-3, 4-tert-Butylcyclohexanone

RL: RCT (Reactant); RACT (Reactant or reagent)

(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

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RN 41836-23-1DP

RN 142042-03-3DP

RN 98-52-2P

RN 64-17-5

RN 67-56-1

RN **67-63-0**

RN 75-84-3

RN 98-53-3

L13 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:208880 CAPLUS

DN 130:313504

TI Fabric softening and antistatic agents containing N-alkanolalkylenepolyamine ester amide compounds

IN Inoue, Kimi

PA Kao Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM D06M013-46

CC 46-5 (Surface Active Agents and Detergents)

Section cross-reference(s): 40

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11081134	A2	19990326	JP 1997-235229	19970829
	JP 3346235	B2	20021118		
PRAI	JP 1997-235229		19970829		
OS	MARPAT 130:313504				
AB	<p>The agents comprise (A) $R_1N(C_mH_{2m}OCOR_2)(C_nH_{2n}NHCOR_3)$ ($R_1 = C_1-4$ alkyl, hydroxyalkyl; $R_2, R_3 = C_{11}-21$ alkyl or alkenyl; $m = 1-10$; $n = 2-3$), their neutralized products or quaternary ammonium compds.; (B) $C_{12}-22$ linear or branched (un)satd. carboxylic acids; (C) C_2-6 glycols, C_3-6 aliph. alcs., C_8-18 arom. esters or/and $C_{10}-15$ terpenoid compds.; and (D) perfume. Thus, an antistatic and softening agent was obtained from a mixt. of N-methyl-N-(hydrogenated tallow fatty acid esterified hydroxyethyl)-N-(hydrogenated tallow fatty acid amidated aminopropyl)amine.cntdot.HCl salt 5, hydrogenated tallow fatty acid 1, a 50:25:10:15 mixt. of di-Et phthalate, benzyl salicylate, benzyl acetate and citronellyl acetate, 0.1, and a perfume 0.03*.</p>				
ST	fabric antistatic softening agent quaternary ammonium compd; fatty acid antistatic softening fabric; perfume antistatic softening fabric; hydrogenated tallow fatty acid alkanolamide softening fabric				
IT	Alcohols, uses RL: TEM (Technical or engineered material use); USES (Uses) (aliph.; fabric softening and antistatic agents from ammonium compds.)				
IT	Esters, uses RL: TEM (Technical or engineered material use); USES (Uses) (arom.; fabric softening and antistatic agents from ammonium compds.)				
IT	Quaternary ammonium compounds, uses Terpenes, uses RL: TEM (Technical or engineered material use); USES (Uses) (fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)				
IT	Antistatic agents Fabric softeners Perfumes (fabric softening and antistatic agents from ammonium compds.)				
IT	Polysiloxanes , uses RL: MOA (Modifier or additive use); USES (Uses) (fabric softening and antistatic agents from ammonium compds.)				
IT	Carboxylic acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (fabric softening and antistatic agents from ammonium compds.)				
IT	Essential oils RL: TEM (Technical or engineered material use); USES (Uses) (lavender, perfume; fabric softening and antistatic agents from ammonium compds.)				
IT	Lavender (<i>Lavandula hybrida</i>) (oils, perfume; fabric softening and antistatic agents from ammonium compds.)				
IT	Essential oils RL: TEM (Technical or engineered material use); USES (Uses) (orange, sweet, perfume compn.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)				
IT	Fatty acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (palm-oil, esters, compds. with N-alkyl-N-ethanol-1,3-propylenediamine, salts or quaternary compds.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)				
IT	Fatty acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (palm-oil; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)				
IT	Essential oils				

RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT Palm oil
RL: TEM (Technical or engineered material use); USES (Uses)
(stearins, compds. with N-alkyl-N-ethanol-1,3-propylenediamine, salts
or quaternary compds.; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow, hydrogenated, esters, compds. with N-alkyl-N-ethanol-1,3-
propylenediamine, salts or quaternary compds.; fabric softening and
antistatic agents contg. N-alkanolalkylenepolyamine ester amide
compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow, hydrogenated; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT 41999-70-6D, compds. with fatty acids, salts or quaternary compds.
151955-40-7 161444-02-6 171064-63-4 171064-64-5 175716-84-4
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents contg. N-
alkanolalkylenepolyamine ester amide compds.)

IT 112-85-6, Docosanoic acid 506-30-9, Eicosanoic acid 544-63-8,
Tetradecanoic acid, uses 73756-39-5
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents from ammonium compds.)

IT 67-56-1, Carbinol, uses 77-83-8, Aldehyde C16 78-69-3 78-70-6,
Linalool 79-77-6, .beta.-Ionone 80-54-6, Lilial 81-14-1, Musk ketone
93-04-9, Yara yara 97-53-0, Eugenol 101-86-0, Hexyl cinnamic aldehyde
103-95-7, Cyclamen aldehyde 104-61-0, Aldehyde C18 106-02-5, Pentalide
106-22-9, Citronellol 106-24-1 110-41-8, Methylnonylacetaldehyde
120-57-0, Heliotropin 121-32-4, Ethylvanillin 121-33-5, Vanillin
123-11-5, Anisaldehyde, uses 125-12-2, Isobornyl acetate 127-48-0,
Edion 128-51-8, Nopyl acetate 151-05-3, Dimethylbenzylcarbinyl acetate
470-82-6, Eucalyptol 1205-17-0, Helional 1506-02-1, Tentarome
2050-08-0, Amyl salicylate 5471-51-2, Raspberry ketone 6864-62-6,
Phenyl acetoacetate 8000-41-7, Terpeneol 16409-43-1, Rose oxide
23726-91-2, .beta.-Damascone 27134-07-2 30385-25-2, Dihydromyrcenol
32210-23-4, p-tert-Butylcyclohexyl acetate 32388-55-9, Acetylcedrene
41199-19-3, Ambrinol 55066-48-3, Phenoxanol 63429-28-7,
.beta.-Methylionone 68140-53-4, Fruitate 80111-68-8, Damascone
80449-98-5, Liral 139504-68-0, Amber core 145334-39-0 176201-25-5,
Aldehyde C14 Peach 176201-49-3, Poarenet 177771-82-3, Ambroxan
183601-27-6 223447-73-2, Tetrahydromugol
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT 60-12-8, Phenylethyl alcohol 77-54-3, Cedryl acetate 80-26-2
91-64-5, Coumarin 93-08-3, Methyl .beta.-naphthyl ketone 101-84-8,
Diphenyl oxide 104-55-2, Cinnamic aldehyde 122-78-1, Phenyl
acetaldehyde 143-07-7, Dodecanoic acid, uses 497-62-1 1222-05-5,
Pearlside 21677-96-3, Geranylnitrile 43052-87-5, .alpha.-Damascone
51566-62-2, Citronellyl nitrile 68039-49-6, Tripral 124899-75-8
188647-24-7
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents from ammonium
compds.)

IT 57-11-4, Octadecanoic acid, uses 57-55-6, 1,2-Propanediol, uses
 67-63-0, Isopropyl alcohol, uses 84-66-2, Diethyl phthalate
 93-92-5, Styryllyl acetate 103-45-7 103-54-8, Cinnamyl acetate
 105-85-1, Citronellyl formate 105-87-3, Geranyl acetate 107-21-1,
 1,2-Ethanediol, uses 112-80-1, Oleic acid, uses 115-95-7, Linalyl
 acetate 118-58-1, Benzyl salicylate 119-36-8, Methyl salicylate
 122-69-0, Cinnamyl cinnamate 134-20-3, Methyl anthranilate 140-11-4,
 Benzyl acetate 150-84-5, Citronellyl acetate 326-61-4, Heliotropyl
 acetate 928-96-1, cis-3-Hexenol 6259-76-3, Hexyl salicylate
 25265-71-8, Dipropylene glycol 56539-66-3, 3-Methoxy-3-methylbutanol
 65405-77-8, cis-3-Hexenyl salicylate

RL: TEM (Technical or engineered material use); USES (Uses)
 (perfume retention aids; fabric softening and antistatic agents contg.
 N-alkanolalkylenepolyamine ester amide compds.)

IT 57-10-3, Palmitic acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (perfume retention aids; fabric softening and antistatic agents from
 ammonium compds.)

RN 41999-70-6D
 RN 151955-40-7
 RN 161444-02-6
 RN 171064-63-4
 RN 171064-64-5
 RN 175716-84-4
 RN 112-85-6
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 RN 544-63-8
 RN 73756-39-5
 RN 67-56-1
 RN 77-83-8
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 RN 101-86-0
 RN 103-95-7
 RN 104-61-0
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 RN 106-24-1
 RN 110-41-8
 RN 120-57-0
 RN 121-32-4
 RN 121-33-5
 RN 123-11-5
 RN 125-12-2
 RN 127-48-0
 RN 128-51-8
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RN 124899-75-8
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RN 57-11-4
RN 57-55-6
RN **67-63-0**
RN 84-66-2
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